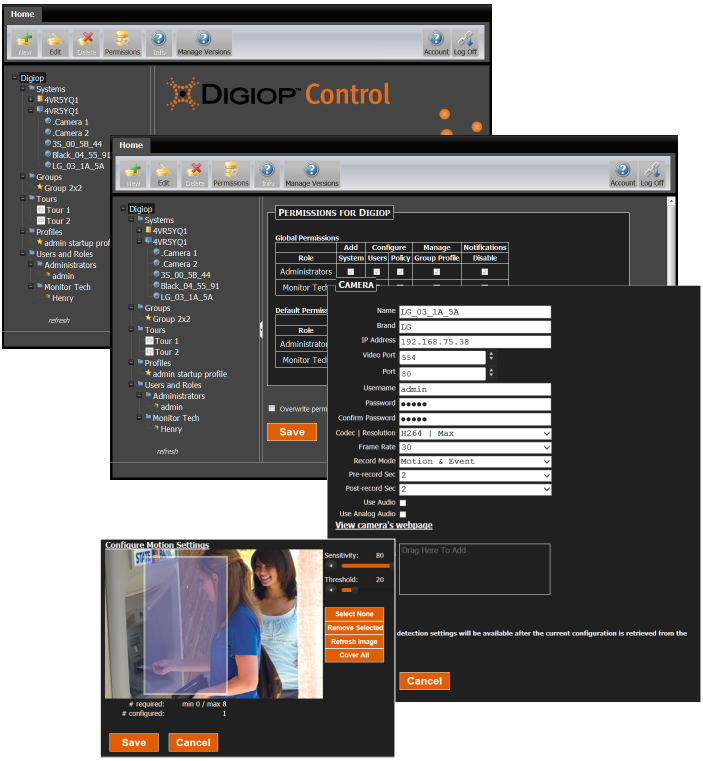
DIGIOP®
Intelligence Inspired

DIGIOP® Control V8.8 User Manual

Products: DH Series, DM Series Hybrid DVRs
DI Series, NT Series NVRs



Please read this manual before using your server, and always follow the instructions for safety and proper use. Save this manual for future reference.

DO_Control_V8.8_SM
4/28/14

Revision History

Date	Reason for Change
7/18/2011	Initial release.
1/31/2012	Includes new V8.1 features including Notifications.
2/7/2012	Includes updates to permissions screen.
10/30/2012	Includes V8.5 features.
1/11/2013	Moved hardware and system troubleshooting appendices to the System Installation and Setup Guide
5/16/2013 5/21/2013	Includes V8.6 features.
9/20/13	Includes V8.7 features.
4/28/14	Includes V8.8 features.

LEGAL NOTICE

The recording, transmission, or broadcast of any person's voice without their consent or a court order is strictly prohibited by law.

infinias and **DIGIOP ELEMENTS** are trademarks of **infinias**. **DIGIOP** is a registered trademark of **infinias**.

DIGIOP® products are designed to meet safety and performance standards with the use of specific DIGIOP® authorized accessories. **infinias** disclaims liability associated with the use of non-DIGIOP® authorized accessories.

infinias makes no representations concerning the legality of certain product applications such as the making, transmission, or recording of video and/or audio signals of others without their knowledge and/or consent. We encourage you to check and comply with all applicable local, state, and federal laws and regulations before engaging in any form of surveillance or any transmission of radio frequencies.

Microsoft, **Windows**, and **Internet Explorer** are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. **Dell** and **OptiPlex** are either registered trademarks or unregistered trade marks of Dell Inc in the United States and other countries.

Other trademarks and trade names may be used in this document to refer to either the entities claiming the marks and names or their products. **infinias** disclaims any proprietary interest in trademarks and trade names other than its own.

infinias
9340 Priority Way West Drive
Indianapolis, IN 46240

Telephone: **866.496.5783** (toll free), email: sales@infinias.com, support@infinias.com

No part of this document may be reproduced or distributed in any form or by any means without the express written permission of **infinias**. The information in this document is subject to change without notice or obligation.

© Copyright 2014, **infinias**. All Rights Reserved.

Table of Contents

SECTION 1 **System Overview** **1**

1.1 DIGIOP® Control and NVRs and hDVR 2

SECTION 2 **Using DIGIOP ELEMENTS™ Software** **3**

2.1 System Startup 3

2.1.1 Desktop options 3

2.2 Open DIGIOP® Control 4

SECTION 3 **Using DIGIOP® Control** **6**

3.1 DIGIOP® Control Main Window 6

3.1.1 Account button 6

3.1.2 Manage Versions button 7

3.2 User permissions 8

3.3 DIGIOP DATA SERVER - Edit Settings 11

3.4 DIGIOP VIDEO SERVER - Edit Settings 12

3.4.1 Configure hDVR capture board 13

3.4.2 Create new analog PTZ profile 13

3.4.3 Spot Monitor Tour 14

3.5 Add analog cameras to the hDVR 14

3.5.1 Configure the analog video capture board 16

3.6 Add "Discovered" IP cameras to the NVR/hDVR 17

3.7 Add an IP camera not "Discovered" 21

3.8 Edit IP camera settings 24

3.9 Create Group 25

3.9.1 Group Permissions 27

3.10 Create Tour 27

3.10.1 Tours Permissions 29

3.11 Create Role 29

3.11.1 Set Permissions for Roles 31

3.12 Create User 31

3.13 User Profiles 33

3.14 System Event Notifications 33

3.15 Add data server streams 34

3.15.1 A New Rule 36

3.15.2 Data server Recorder Events 37

3.15.3 Data server System Health 37
3.15.4 Fraudulent exception transactions 37
3.16 Recorder Events 38
3.16.1 Trigger recording on sensor input (hDVRs only) 38
SECTION 4 Data Server Streams 40
4.1 About Associated Resources 40
4.1.1 I/O triggering a video channel to record 40
4.1.2 Fraudulent Exception Transactions 40
4.1.3 Conversion Rate 41
4.2 Data streams 41
4.2.1 Emulators 42
4.2.2 Pre-configured data streams in DIGIOP® Control 42
SECTION 5 Create a Rule or Query 51
5.1 Rules 51
5.2 Custom Query 61
SECTION 6 Using Viewer 63
6.1 Searching for recorded video 65
6.2 Search > Tools Menu 67
6.2.1 Using the Smart Search tool 67
6.2.2 Using the Image Adjust Tool during live playback 71
APPENDIX A Hard Drive Configuration 73
APPENDIX B Software Upgrade to DIGIOP ELEMENTS™ 74
APPENDIX C Adding DIGIOP® Licenses 75
APPENDIX D File Naming Conventions 78
APPENDIX E TCP/IP Port Settings Using the Firewall 80
APPENDIX F Warranty Information 81

SECTION 1
System Overview

DIGIOP ELEMENTS™ is a ground breaking Video-Enhanced Intelligence Platform that provides a single, user-friendly interface to the critical video and data intelligence you rely on to effectively manage your business.

The DIGIOP ELEMENTS™ software suite extends the value of surveillance video beyond the traditional benefits of loss prevention and risk management, by combining raw video with information from back-office systems and video analytics. The result is an integrated dashboard that provides your functional leaders (management, operations, merchandising, marketing, and IT) with an accurate real-time and recorded view of the performance of the business.

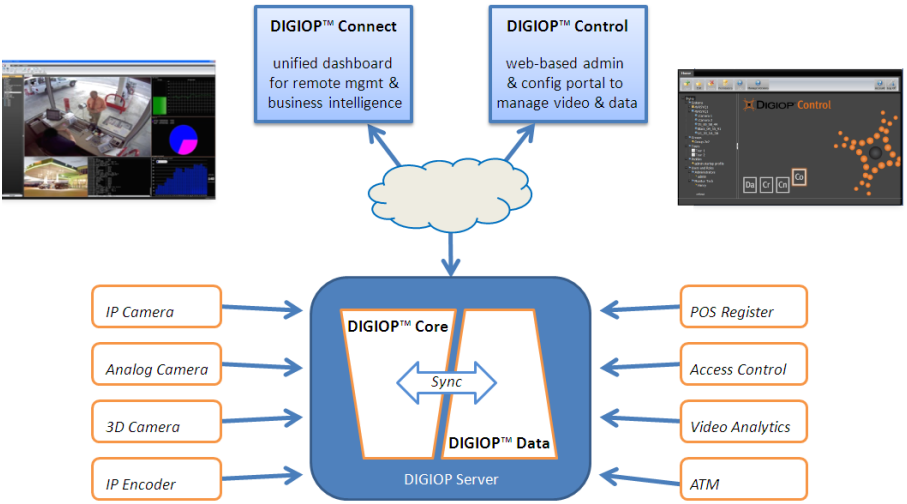
DIGIOP ELEMENTS™ features four powerful software components: DIGIOP® Connect, DIGIOP® Control, DIGIOP® Core, and DIGIOP® Data. Together, these elements provide the foundation for a revolutionary tool to manage your business intelligence.

- **DIGIOP® Core**
  - DIGIOP® Core is an extensible video recording platform that provides real-time recording of analog and IP cameras.
  - DIGIOP® Core software can be configured to display live video as it's recorded, or to run in the background and archive video data for display remotely using DIGIOP® Connect.

- **DIGIOP® Control**
  - A web-based administration portal for NVR and hDVR servers that enables you to configure your systems and manage permissions from the Internet.
  - DIGIOP® Control allows you to easily manage your single- or multi-site system. DIGIOP® Control includes: add and configure cameras, set user rights, establish global and local level permissions for systems, cameras, and data streams.

- **DIGIOP® Connect**
  - Provides is a unified dashboard that displays both video and data intelligence on a single admin portal, enabling remote management of both single-site and multi-site systems.
  - Provides search tools including thumbnail search, timeline search, replay search, digital zoom, and tours, allowing you to quickly locate, save and export video and data.

- **DIGIOP® Data**
  - DIGIOP® Data is a data management software that integrates external data with video recorded by DIGIOP® Core. This information can be displayed and retrieved with DIGIOP® Connect.
  - DIGIOP® Data can integrate video with retail Point-of-Sale (POS), with school Time & Attendance, Electronic Access Control (EAC), etc. to expand the potential of your system.



Local and Hosted-Enterprise Management

The DIGIOP ELEMENTS™ server can be managed either locally or managed by DIGIOP®. With a locally managed NVR or hDVR server, the configuration settings are retained on the server. In a hosted enterprise environment, DIGIOP® manages the servers and save the server configuration settings at DIGIOP®. For hosted enterprise management, the NVR and hDVR servers must be accessible through the Internet.

The selection of using either local or hosted enterprise management is made through the *Enterprise Configuration Application* in the Windows Start menu.

1.1 DIGIOP® Control and NVRs and hDVR

This document includes a user interface description of the DIGIOP® Control admin portal for DIGIOP ELEMENTS™ NVRs and hDVRs. DIGIOP® Control is used to manage IP and analog cameras, user accounts and data streams, and create groups, tours and user profiles for monitoring surveillance cameras and data. DIGIOP® Control can be used concurrently with DIGIOP® Connect, which provides a remote view of live and recorded video and data streams.

SECTION 2
Using DIGIOP ELEMENTS™ Software

DIGIOP ELEMENTS™ consists of DIGIOP® Core, DIGIOP® Data, and DIGIOP® Control software and comes installed on hDVRs and NVRs. This includes the basic application to view live and archived video, configure users, etc.

2.1 System Startup

The initial power-on and initialization of a DIGIOP ELEMENTS™ NVR or hDVR system is complete when the Windows 7 Professional desktop display similar to the following, appears. No log on is required.

After the initialization of the server software is complete, you can log in to the system either locally or remotely through the DIGIOP® Control admin portal.

2.1.1 Desktop options

After the DIGIOP ELEMENTS™ Windows 7 system is fully running, you can perform any of the following:

- Open DIGIOP® Viewer to search for, watch, and backup recorded video.
- Open DIGIOP® Control on the server desktop (see the procedure later in this section).
- View or add additional licenses to the system.
- All Windows 7 desktop options with Administrator privileges, including power off or restart of the server.

2.2 Open DIGIOP® Control

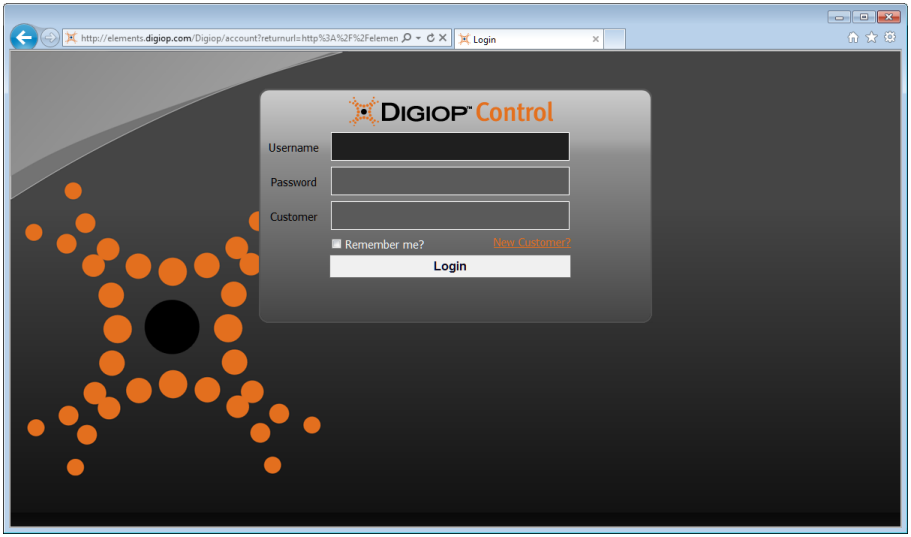
1. To open DIGIOP® Control:

   a. **From the server desktop**: Start the Microsoft® Internet Explorer® (IE) browser. The URL defaults to: **http://localhost/Digiop**. You can also use the IP address **http://127.0.0.1/digiop**

   b. **From a computer on the LAN with the NVR/hDVR**: DIGIOP® Control can be accessed from any computer with a internet browser (IE, Mozilla® Firefox®, or Google Chrome) across the LAN on the subnet where the NVR/hDVR is networked. Open the browser and use the URL: *<IP Address>*/digiop where *IP Address* is the fixed IP address of the NVR/hDVR. In the examples shown here, the IP address is 192.168.5.11, and is on the same subnet as the computer I am accessing it from. The URL to use is: **http://192.168.5.11/digiop**.

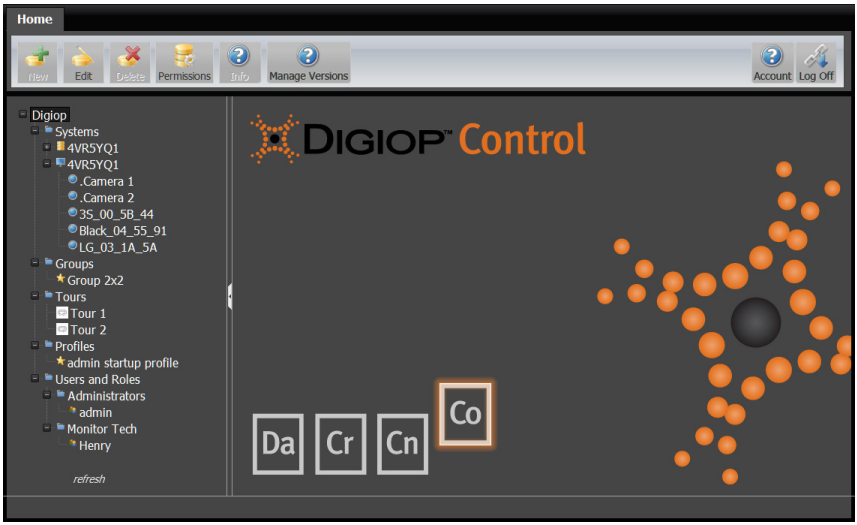
   c. **From the Internet**: Start the Microsoft® Internet Explorer® (IE) browser and use the DNS address, if configured.

   d. **From DIGIOP® hosted servers**: Open an internet browser (IE, Mozilla® Firefox®, or Google Chrome). Use the URL: elements.digiop.com



2. Enter your **Username**, **Password**, and **Customer** name:

   — The default Username and Password are admin and admin.
   — The Customer name for desktop and local computer logins is digiop For DIGIOP® hosted systems, use your assigned customer name. To obtain a customer name, go to http://elements.digiop.com, click the link New Customer?, then follow the instructions to apply for one. You should receive your Customer name within 1 business day.


Home
New
Edit
Delete
Permissions
Info
Manage Versions
Account
Log Off
Digiop
Systems
4VR5YQ1
4VR5YQ1
.Camera 1
.Camera 2
3S_00_5B_44
Black_04_55_91
LG_03_1A_5A
Groups
Group 2x2
Tours
Tour 1
Tour 2
Profiles
admin startup profile
Users and Roles
Administrators
admin
Monitor Tech
Henry
refresh
DIGIOP™ Control
Da
Cr
Cn
Co

SECTION 3
Using DIGIOP® Control

The DIGIOP® Control interface can be opened either through a web browser that can connect to the NVR or hDVR (across a LAN or the Internet), or from the NVR/hDVR desktop (see above). DIGIOP® Control allows you to manage your video, data, and user information of a single- or multi-site system. Control includes: add and configure cameras, set user rights, establish global and local level permissions for systems, cameras, and data streams.

3.1 DIGIOP® Control Main Window

NOTE: In this example, 4VR5YQ1 is the system hostname

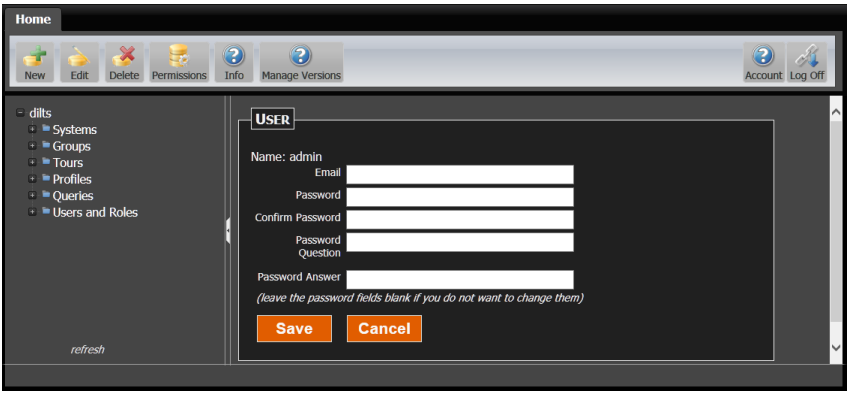
3.1.1 Account button

The Account button is located in the upper right corner of the DIGIOP® Control window. Clicking this button opens a menu to change the your user account settings, including your email address and the password you use to log into DIGIOP® Control.

DIGIOP® strongly recommends that the default **admin** password (**admin**) be changed to improve the security of your system. To change the password:

1. Log into DIGIOP Control with username **admin**.

2. Click the **Account** button.



3. Enter a strong password (at least 6 characters containing an uncommon combination of upper- and lower-case letters and numbers) in the **Password** and **Confirm Password** fields. You can optionally enter a **Password Question** and **Password Answer** into those fields provided.

4. If using Email messaging with your system, enter your Email address in the appropriate field.

5. Click **Save** to retain the new settings.

3.1.2 Manage Versions button

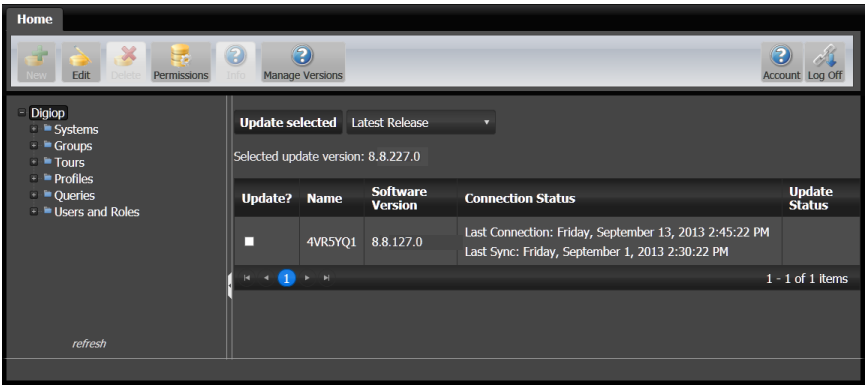
The Manage Versions button appears on DIGIOP® "Hosted" systems and is located at the top of the DIGIOP® Control window. This feature is useful in identifying the software version level of your system(s), and updating your system(s) to the Latest Release, Latest Beta, Latest Hotfix, or Custom version.

***Do not** update your system to the Latest Beta, Latest Hotfix, or Custom system unless recommended to do so by DIGIOP® Support.*

To use the Manage Versions feature:

1. Log into DIGIOP Control with a username with Administrative role privileges (System Configure permission; see "3.2 User permissions" on page 8).

2. Click the **Manage Versions** button.



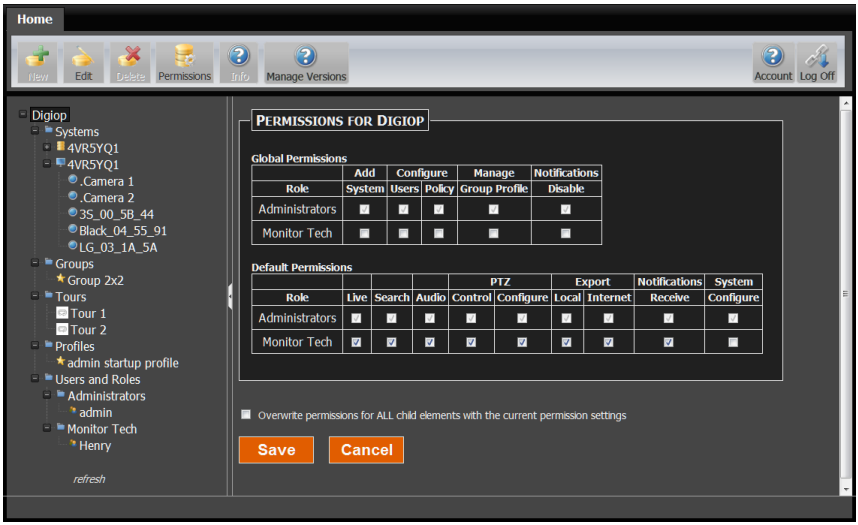
3. Open the **Update selected** drop-down list and choose the type of update you want to apply.

4. Check the **Update** box in front of the system **Name**(s) you want to update. The Update Status will appear in the column to the right.

3.2 User permissions

All DIGIOP ELEMENTS™ users are assigned a Role that includes a set of permissions, i.e., what level of access they have to the server. Initially, only the **admin** user with the Administrator Role (all permissions enabled) is configured in the system. **admin** can create other roles and users. See **Create Roles** later in this section.

In the following example, the role "Monitor Tech" was added by creating a new role in the Users and Roles component.



GLOBAL PERMISSIONS

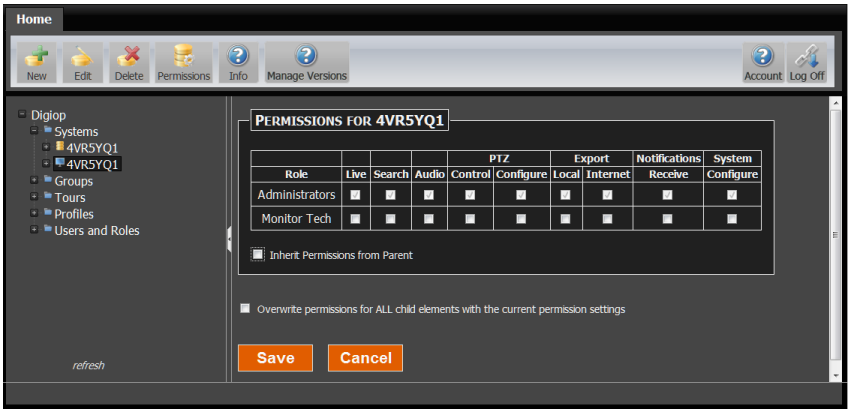
Global Permissions (see above screen) allows the administrator to determine what roles can add, configure, and manage systems and profiles. Permissions set in the top level determine what access Roles have at lower levels of the tree. These can be applied to individual devices. Additionally, individual devices can further restrictions.

The Permissions for DIGIOP® menu above can be opened in two way (by admin or someone with permission to do so):

- By clicking (highlighting) **Users and Roles**, then clicking the **Permissions** icon at the top of the window.
- By clicking **Digiop** (at the top of the tree), then **Permissions** icon at the top of the window.

SYSTEM-LEVEL PERMISSIONS

System level permissions allow Roles to be applied to selected systems. Use this feature apply certain roles to systems not inheriting Global permissions (*Inherit Permissions from Parent* option is unchecked).

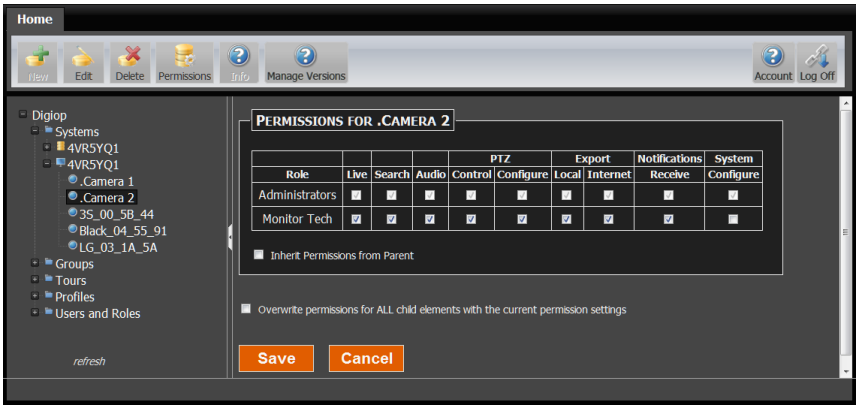


The System-level permissions for DIGIOP® menu above can be opened by clicking (highlighting) a system in the tree (here, **4VR5YQ1** video server), then clicking the **Permissions** icon at the top of the window, and deselecting the *Inherit Permissions from Parent* option.

DEVICE-LEVEL PERMISSIONS

This level of permissions allows a role to be assigned to an individual device or stream not only at a system or global level through inheritance. The permissions configured for the device can be established on all child devices, if selected.

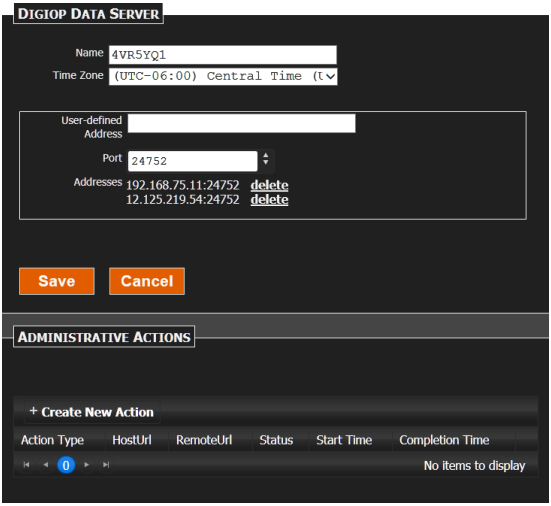
NOTE *For Notifications from a device to be received in DIGIOP® Connect, the Notifications permission for the device must be enabled.*



The Device-level permissions for DIGIOP® menu above can be opened by clicking (highlighting) a device in the tree (here, **.Camera 2**), then clicking the **Permissions** icon at the top of the window.

3.3 DIGIOP DATA SERVER - Edit Settings

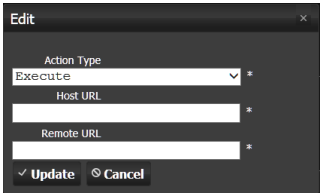
To open DIGIOP DATA SERVER the settings window, click the Data Sever icon in the object tree to highlight it, then click the **Edit** button in the application header.



In the DIGIOP DATA SERVER menu, you can rename the server, select a different Time Zone, and setup a User-defined Address. The User-defined Address is useful for unique network situations only. Normally additional configurations, or a change in the network configuration, is not needed. After changing any of these parameters, click **Save**. Click **Cancel** to close the window without saving.

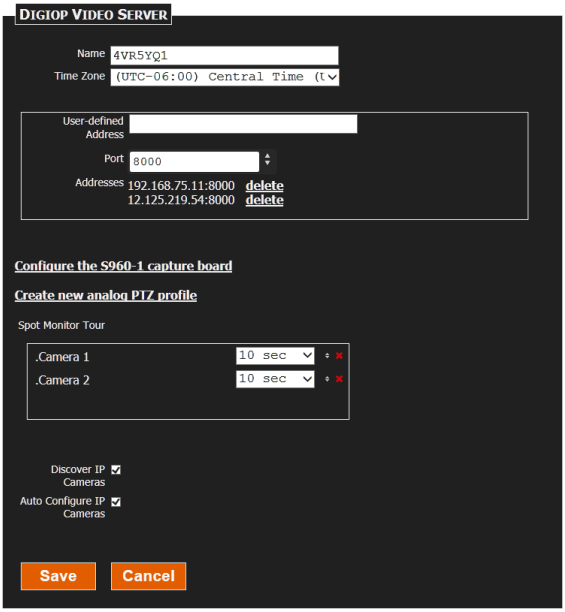
NOTE *If the system you are configuring has 1) only analogue cameras and 2) is not networked (connected to a LAN), enter **127.0.0.1** in the **User Defined Address** field. DIGIOP® Connect must be run on the same computer used as the DIGIOP ELEMENTS™ system.*

Administrative actions allows allow for a download to, upload from, or execute (remote execute) commands on the system. This feature is useful for system maintenance. To use this feature, click the **+ Create New Action** bar, then enter the required parameters in the window.



3.4 DIGIOP VIDEO SERVER - Edit Settings

To open DIGIOP VIDEO SERVER the settings window, click the Video Sever icon in the object tree to highlight it, then click the **Edit** button in the application header. The screen below shows the edit menu for a hybrid DVR (hDVR) which includes setup links for the video capture board and PTZ camera profiles.



In the DIGIOP VIDEO SERVER menu, you can rename the server, select a different Time Zone, and setup a User-defined Address. The User-defined Address is useful for unique network situations only. Normally additional configurations, or a change in the network configuration, is not needed.

The **Discover IP Cameras** option causes the server to search the network for all supported IP cameras. Check the box if you want to use this feature.

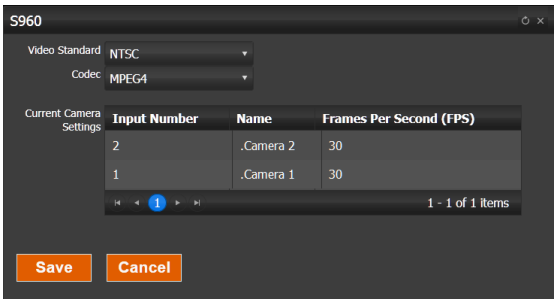
The **Auto Configure IP** Cameras option causes the server to add all compatible IP cameras it finds on the network to the system. If the network contains more cameras than you have licenses for, or some IP cameras on the network are used by other DVRs, using this feature may cause configuration issues.

After changing any of these parameters, click **Save**. Click **Cancel** to close the window without saving.

If you are configuring a hDVR, the menu also includes a link to the video capture card, a PTZ camera profile screen, and a **Spot Monitor Tour** box.

3.4.1 Configure hDVR capture board

Click the link **Configure the <type> capture board** link to open the menu for the board.



To change the settings on this board:

1. Open the **Video Standard** drop-down menu, and select either NTSC (USA, other locations) or PAL (Europe, other locations).

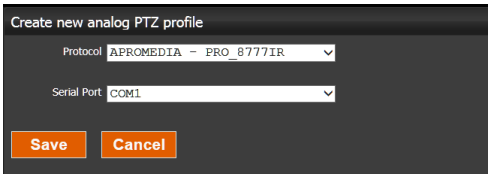
2. Open the CODEC drop-down menu, then select either **MPEG4** or **H.264**.

NOTE *H.264 compression demands a large amount of processor use. It is not recommended on systems with more than 8 cameras.*

3. Click **Save** to retain your settings, or **Cancel** to close the window.

3.4.2 Create new analog PTZ profile

Click the link **Create new analog PTZ profile** link to open the menu for the camera.



In the menu above, open the **Protocol** drop-down menu to select the camera protocol, then open the **Serial Port** drop-down list to select the COM port to use with the protocol. Click **Save** to retain your settings, or **Cancel** to close the window.

3.4.3 Spot Monitor Tour

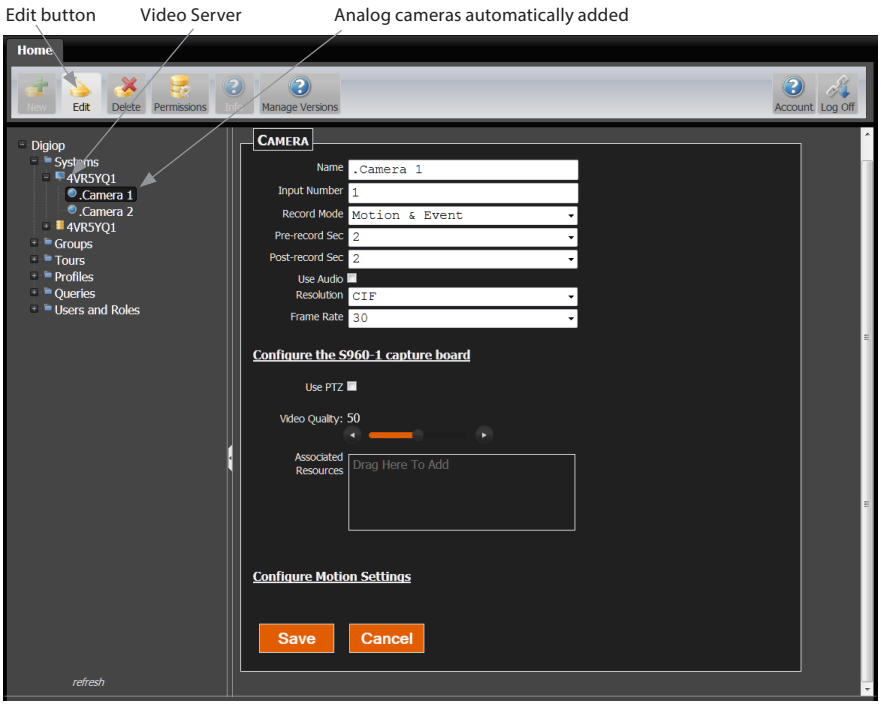
The hDVRs capture card can be configured to sequentially display (Tour) analog cameras attached to the card. The video display signal is sent out through the VOUT lead(s) on the Video In adapter cable.

To use this feature, drag an analog camera stream into the Spot Monitor Tour box. For each camera you add, open the drop-down list to the right of the camera and select the duration (dwell time) for the camera. The DIGIOP VIDEO SERVER menu above shows two cameras in a tour, each with a dwell time of 10 seconds. Click **Save** to retain your settings.

3.5 Add analog cameras to the hDVR

DIGIOP® Control adds analog cameras to the video server when they are connected to the adapter cable of the video capture card. Each cameras is assigned to the video channel is physically connected to. Analog cameras appear in DIGIOP® Control as "**.Camera 1**" for the camera connected to analog channel 1, "**.Camera 2**" for the camera connected to channel 2, etc.

1. Find the Systems entry in the list in the left frame of the home page,then click the icon to open the Systems list. Inside the Systems list are two entries for the NVR/hDVR you connected to. The one prefaced with the blue "display" icon identifies the video server. The one above it with the yellow "barrel" icon identifies the data server. In the window below, **.Camera 1** and **.Camera 2** were added automatically.



2. In the list under the Video server, click the name of the analog camera you want to configure.

3. Click the **Edit** button The **Camera** configuration window will open. In this menu you can:

   a. Change the name of the camera by editing the field.

   b. Change the recording mode. Open the drop-down menu and select either **Motion & Event**, **Continuous & Event**, or **Event only**.

NOTE *An event, such as a sensor input becoming active, can be used to trigger video recording. To configure your camera for event recording, see "3.16 Recorder Events" on page 38.*

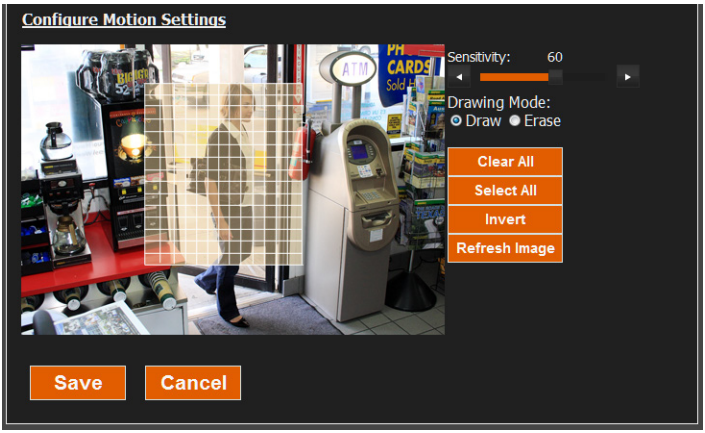
   c. Change the Pre-record and Post-record times using the drop-down menus (select 0 ~ 15 seconds).

   d. Select the preferred **Resolution** and **Frame Rate** from the drop-down lists.

   e. Check **Use Audio** and **Use PTZ** of these options apply.

   f. Drag the slider on the Video Quality slider bar to set the video quality you need.

   g. Click **Configure Motion Settings** to setup the motion detection zone(s), then scroll down to the bottom of the frame.



- The grid overlay identifies the area of the video that is sensed for motion. Initially, the entire video image is selected for motion sensing.
- The **Sensitivity** setting is represents how sensitive the motion detection area is to detect motion. A large sensitivity number will detect small objects, whereas a small number will not. The default value is 60.

- **Drawing Mode**"**Draw**" enables you to select individual cells in the grid for motion sensing by holding down the left mouse button and dragging the cursor across the cells you want to select. Similarly, to de-select cells, click "**Erase**", then hold down the left mouse button and drag the cursor across the cells that are not important.
- Click **Clear All**, **Select All**, or **Invert** to act on the entire video image.
- Click **Refresh** to refresh the video image.

4. Click **Save** to retain your settings.

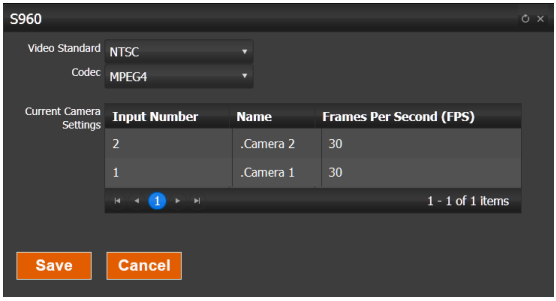
5. Repeat this procedure for all analog cameras added to the system.

3.5.1 Configure the analog video capture board

Configuration of the analog video capture board affects all analog video channels. The board shown below can be configured for either NTSC or PAL video standard, and MPEG4 or H.264 CODEC. Different video capture boards may have different options. To configure the board:

1. Click on one of the analog camera entries listed in the device tree under the video server, then click the **Edit** button.

2. On the Camera configuration screen, click **Configure the <type> capture board**. To change the settings:



a. Open the **Video Standard** drop-down menu, and select either NTSC or PAL.

b. Open the CODEC drop-down menu, then select either **MPEG4** or **H.264**.

NOTE *H.264 compression demands a large amount of processor use. It is not recommended on systems with more than 8 cameras.*

3. Click **Save** to retain your settings.

3.6 Add "Discovered" IP cameras to the NVR/hDVR

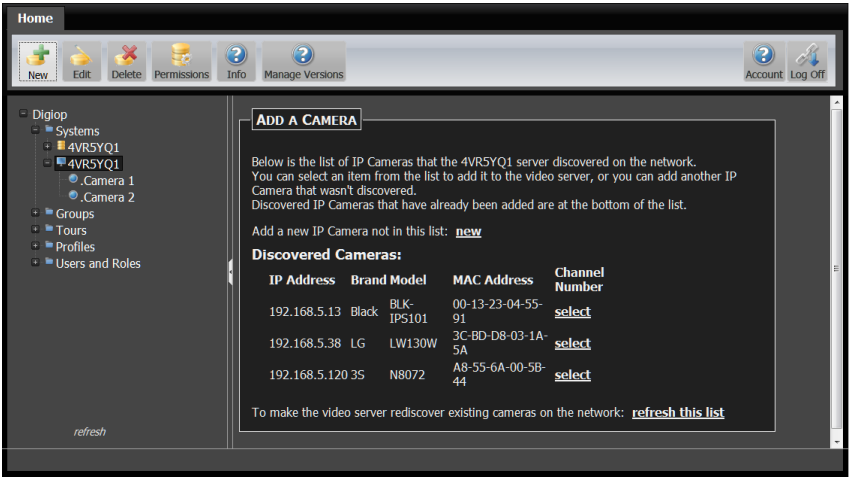
The DIGIOP® server will automatically discover the IP cameras compatible with DIGIOP ELEMENTS ™ and list them in the Video Server **Add A Camera** window (if the Discover IP cameras option selected), and automatically configure them (if the Auto Configure IP Cameras option is selected). See "3.4 DIGIOP VIDEO SERVER - Edit Settings" on page 12.

If the cameras are not automatically configured, you must add them to the system. To add these IP cameras to the NVR/hDVR:

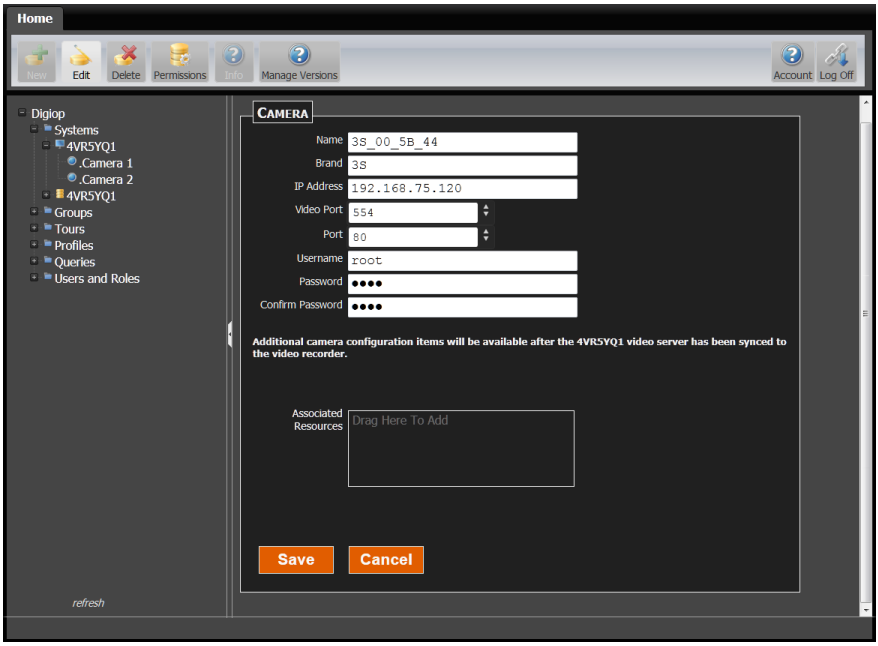
1. Find the Systems entry in the list in the left frame of the page,then click the icon to open the Systems list.

2. Click the Video server (blue display screen) icon to select it.

3. Click the **New** button at the top of the page. The Add Camera pane will open in the right frame. The hostname for the NVR in this example is 4VR5YQ1.

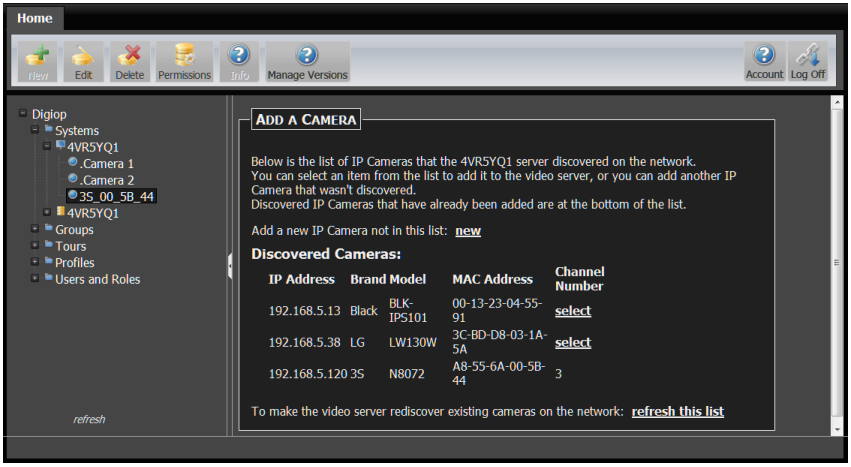

Home
New
Edit
Delete
Permissions
Info
Manage Versions
Account
Log Off
Digiop
Systems
4VR5YQ1
4VR5YQ1
.Camera 1
.Camera 2
Groups
Tours
Profiles
Users and Roles
refresh
ADD A CAMERA
Below is the list of IP Cameras that the 4VR5YQ1 server discovered on the network.
You can select an item from the list to add it to the video server, or you can add another IP Camera that wasn't discovered.
Discovered IP Cameras that have already been added are at the bottom of the list.
Add a new IP Camera not in this list: new
Discovered Cameras:
IP Address Brand Model MAC Address Channel Number
192.168.5.13 Black BLK-IPS101 00-13-23-04-55-91 select
192.168.5.38 LG LW130W 3C-BD-D8-03-1A-5A select
192.168.5.120 3S N8072 A8-55-6A-00-5B-44 select
To make the video server rediscover existing cameras on the network: refresh this list

4. If "Discovered Cameras" are listed in the **Add a Camera** frame, find the IP address of the camera you want to add, then click the associated **select** action link. In this example, the camera for model N8072 was selected.

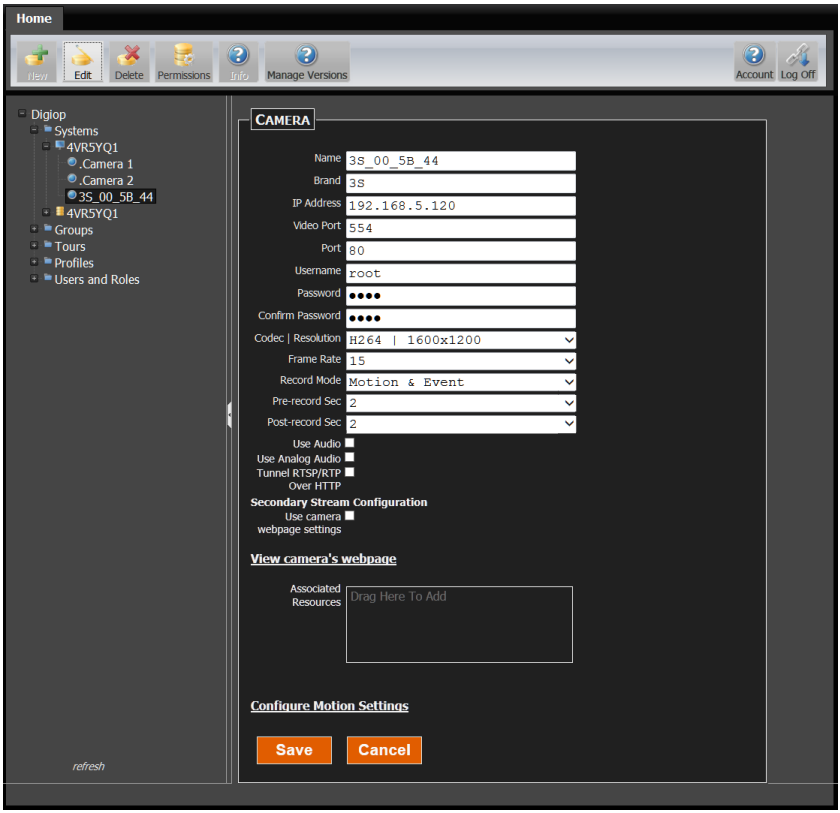


5. If the default parameters listed are acceptable, click **Save**. The camera will be added to the system and automatically assigned to a camera channel in the NVR or hDVR.

6. In the left frame, open the list of the video server (if necessary) by clicking the icon.


Home
New
Edit
Delete
Permissions
Info
Manage Versions
Account
Log Off
Digiop
Systems
4VR5YQ1
.Camera 1
.Camera 2
3S_00_5B_44
4VR5YQ1
Groups
Tours
Profiles
Users and Roles
refresh
ADD A CAMERA
Below is the list of IP Cameras that the 4VR5YQ1 server discovered on the network.
You can select an item from the list to add it to the video server, or you can add another IP Camera that wasn't discovered.
Discovered IP Cameras that have already been added are at the bottom of the list.
Add a new IP Camera not in this list: new
Discovered Cameras:
IP Address Brand Model MAC Address Channel Number
192.168.5.13 Black BLK-IPS101 00-13-23-04-55-91 select
192.168.5.38 LG LW130W 3C-BD-D8-03-1A-5A select
192.168.5.120 3S N8072 A8-55-6A-00-5B-44 3
To make the video server rediscover existing cameras on the network: refresh this list

7. Click the camera you added to highlight it, then click the **Edit** button. Notice that the configuration screen for the camera includes additional options. If you don't see listed the camera you want to add, click the **new** hyperlink and continue with the procedure at "3.7 Add an IP camera not "Discovered"" on page 21.



8. Change the recording mode if necessary. Open the drop-down menu and select either **Motion & Event**, **Continuous & Event**, or **Event only**.

NOTE *An event, such as a sensor input becoming active, can be used to trigger video recording. To configure your camera for event recording, see "3.16 Recorder Events" on page 38.*

9. In the Camera menu, select the **Codec | Resolution**, **Frame Rate**, **Record Mode**, **Pre-record Sec** and **Post-record-Sec** you prefer from the drop-down lists.

NOTE *Some cameras include a dual stream option. When selecting this option, setup the secondary stream resolution in the camera. DIGIOP® Connect client software will display video from secondary stream. The server will record the stream selected in DIGIOP control. You can also view video in the high stream resolution by changing the viewing setting in DIGIOP® Control.*

10. Check the boxes that apply for **Use Audio**, **Use Analog Audio**, and **Use PTZ**. Although these options appear on the menu, the camera model may not include these features.

11. Click **Configure Motion Settings** to setup the motion detection areas(s), then scroll down to the bottom of the frame.

NOTE

In the screen above:

- *3S, LG, and BLACK brand IP camera show motion detection areas in blue (see above).*
- *Axis cameras show motion detection areas in red.*
- *Some camera models support both Sensitivity and Threshold adjustments. Only the supported settings are displayed.*
- *Different camera models support a minimum and maximum number of regions. The menu indicates the number of regions configured and the minimum/maximum allowed for the camera*
- *The following buttons are available:*
  - ***Select None**: deselect all motion detection areas*
  - ***Remove Selected**: remove the selected motion detection area. The selected area is bordered in white.*
  - ***Refresh Image**: fetch a new image from the camera*
  - ***Cover All**: remove all configured motion detection areas and create a new area of the selected type (include (default) or exclude, if selectable) to cover the entire image*

— Initially the entire video frame is selected for motion detection. To improve processor efficiency, select only the portions of the image that need to be sensed for motion:

» Click **Remove Selected** to clear all motion detection areas.

» Using a mouse, drag a rectangle over the area you want to sense for motion. The selected area is masked by a semi-opaque box with a light-colored border.

- » For the area selected, adjust the **Sensitivity** (slider) of the area you selected. A large sensitivity number will detect small objects, whereas a small number will not. The default value is 60.
- » Adjust the **Threshold** (slider) of the area you selected. Threshold sets the amount of the detection area that has to change before motion is sensed.

12. Click **Save** to retain your settings.

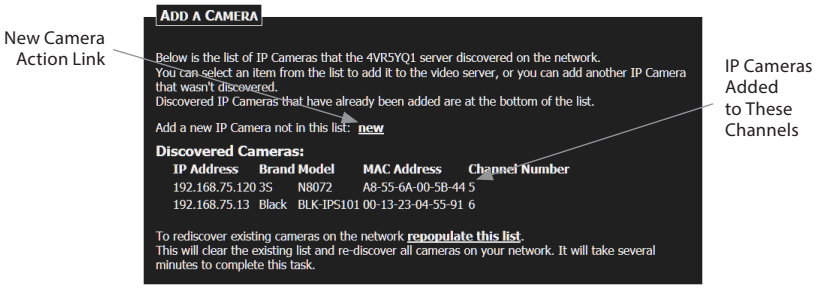
13. Repeat this procedure to add additional cameras to DIGIOP® Control.

14. In the left frame of the home window, open the Systems list, then open the click the icon in front of the video server. Entries for the cameras you added will appear in the list.

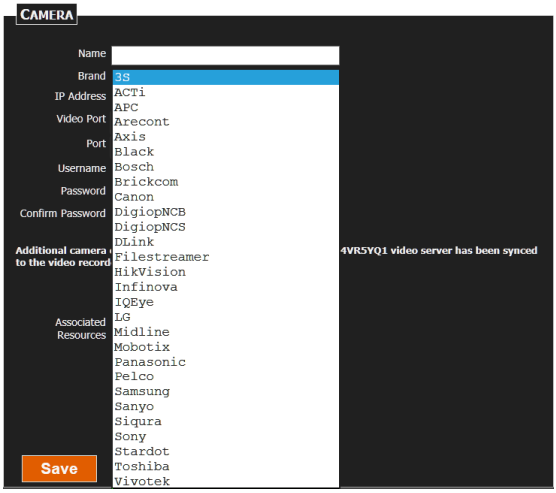
3.7 Add an IP camera not "Discovered"

If you chose to not Discover IP Cameras when you configured the Video Server, or if the camera you want to add was not "Discovered", you can manually add IP cameras to DIGIOP® Control. The cameras you add must be compatible with DIGIOP Elements™.

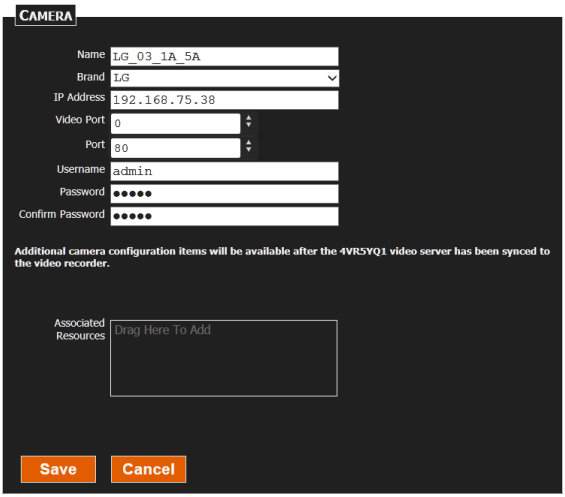
1. Click the **new** action link in the **Add a Camera** pane.


New Camera Action Link
ADD A CAMERA
Below is the list of IP Cameras that the 4VR5YQ1 server discovered on the network.
You can select an item from the list to add it to the video server, or you can add another IP Camera that wasn't discovered.
Discovered IP Cameras that have already been added are at the bottom of the list.
Add a new IP Camera not in this list: new
Discovered Cameras:
IP Address Brand Model MAC Address Channel Number
192.168.75.120 3S N8072 A8-55-6A-00-5B-44 5
192.168.75.13 Black BLK-IP5101 00-13-23-04-55-91 6
To rediscover existing cameras on the network repopulate this list.
This will clear the existing list and re-discover all cameras on your network. It will take several minutes to complete this task.
IP Cameras Added to These Channels

2. In the Camera settings list, select the brand from the drop-down list, then enter the remaining settings as needed.

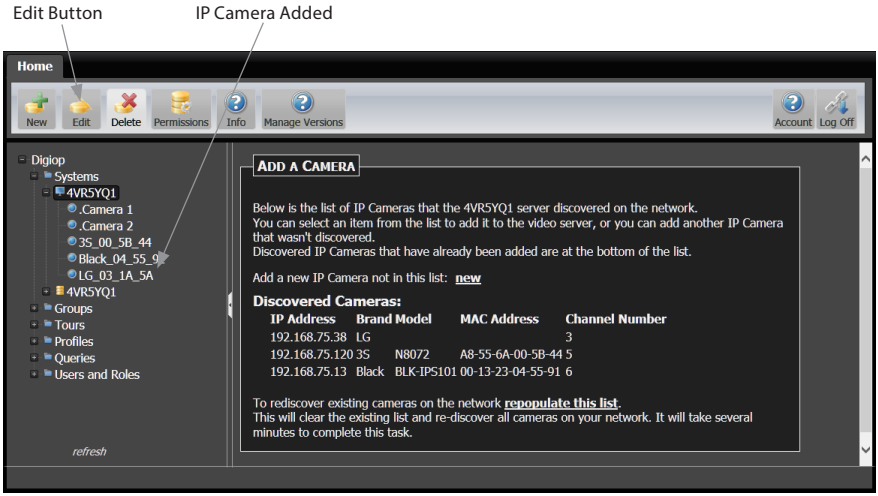


3. Edit the files in the menu as needed to identify the camera.

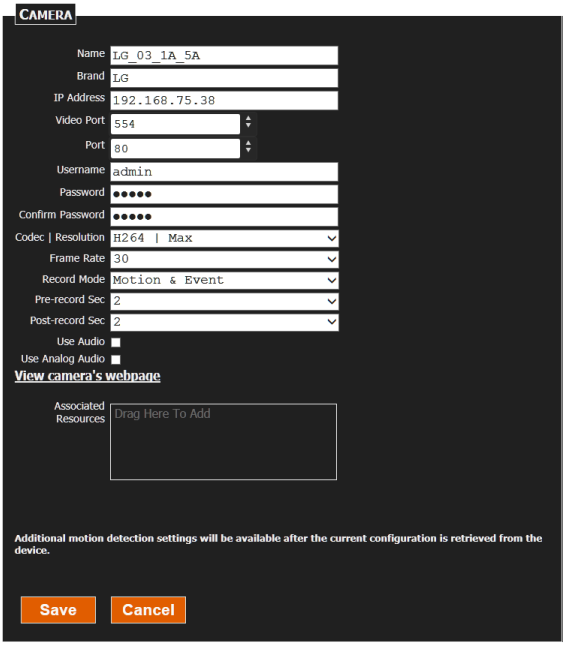


4. Click **Save** to update the video server with the new IP camera.

5. In the device tree, click the entry for the camera you added, then click the **Edit** button.


Edit Button
IP Camera Added
Home
New
Edit
Delete
Permissions
Info
Manage Versions
Account
Log Off
Digiop
Systems
4VR5YQ1
.Camera 1
.Camera 2
3S_00_5B_44
Black_04_55_9
LG_03_1A_5A
4VR5YQ1
Groups
Tours
Profiles
Queries
Users and Roles
refresh
ADD A CAMERA
Below is the list of IP Cameras that the 4VR5YQ1 server discovered on the network.
You can select an item from the list to add it to the video server, or you can add another IP Camera that wasn't discovered.
Discovered IP Cameras that have already been added are at the bottom of the list.
Add a new IP Camera not in this list: new
Discovered Cameras:
IP Address Brand Model MAC Address Channel Number
192.168.75.38 LG 3
192.168.75.120 3S N8072 A8-55-6A-00-5B-44 5
192.168.75.13 Black BLK-IPS101 00-13-23-04-55-91 6
To rediscover existing cameras on the network repopulate this list.
This will clear the existing list and re-discover all cameras on your network. It will take several minutes to complete this task.

6. In the camera menu below, note that additional fields appeared. Edit those fields as needed, then click **Save**.

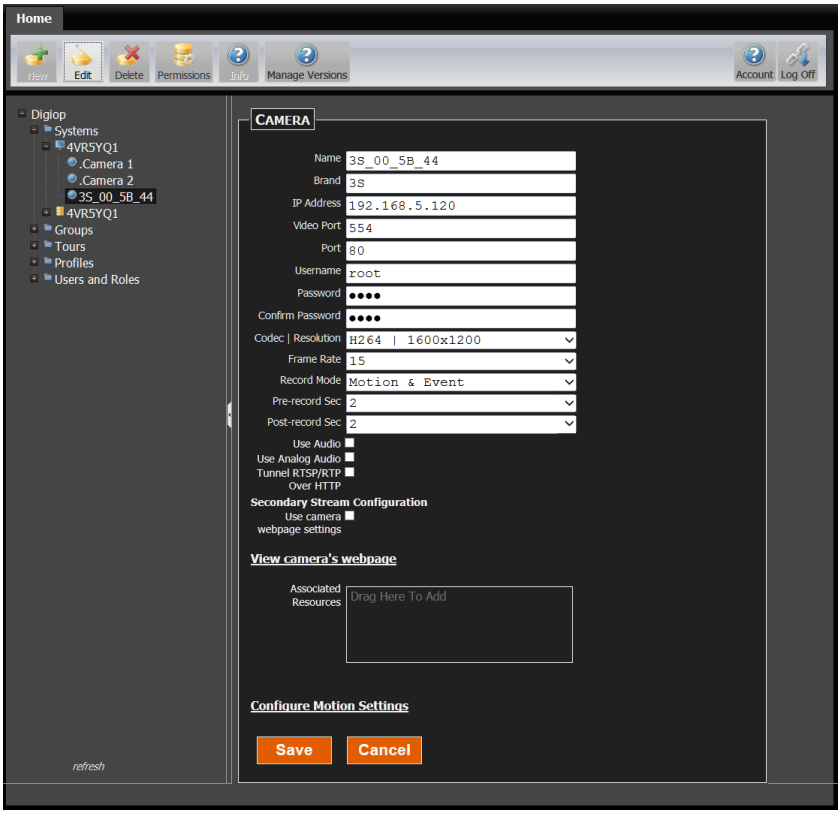


7. Depending on the settings you selected for Motion detection, additional information may need to be retrieved from the camera. Re-edit this menu later, if necessary, to reconfigure these settings.

3.8 Edit IP camera settings

Camera settings, such as the Name, Brand, resolution, frame rate, record mode, etc. are edited within DIGIOP® Control. Note that changing network settings here for an IP camera must also be performed within the camera setup.

1. In the list of cameras added to the video server, click the entry for the camera whose settings you want to edit, then click the **Edit** button at the top of the Home page.



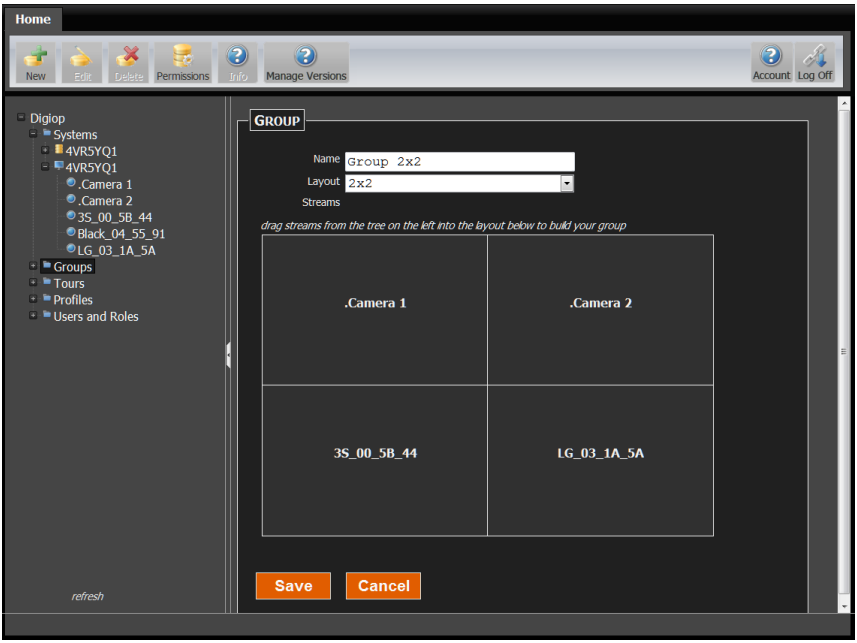
2. In the settings list at the right, change the items as needed. Refer to "3.4 Add IP cameras to the NVR/hDVR" on page 12 for more information.

3. Click **Save** to update the video server.

3.9 Create Group

A group is a selection of cameras and/or data streams that can be displayed as a unit with DIGIOP® Connect. Groups can be displayed individually, with other groups in a Tour. To create a group:

1. Click the **Group** entry in the left frame of the Home page, then click the **New** button at the top of the window.



2. In the Group settings window, enter the name of the group in the **Name** field.

3. Open the **Layout** drop down list and select the preferred split-screen arrangement for the group. In the Example above, a 2x2 split-screen layout was selected.

4. Add a camera or data stream to the group by dragging the camera/data stream entry from the tree in the left frame and dropping it into a of the frame in the group layout display. Four cameras were added to the layout shown above.

5. Click **Save** to update DIGIOP® Control. If DIGIOP® Connect is monitoring the system, click **Refresh** in Connect to update the Group information.

6. Open the **Groups** list in the left frame by clicking the associated icon. Verify that the group you created now appears in the list.

You can Edit/Delete the group by clicking the clicking the group name, then clicking the Edit/Delete buttons at the top of the window.

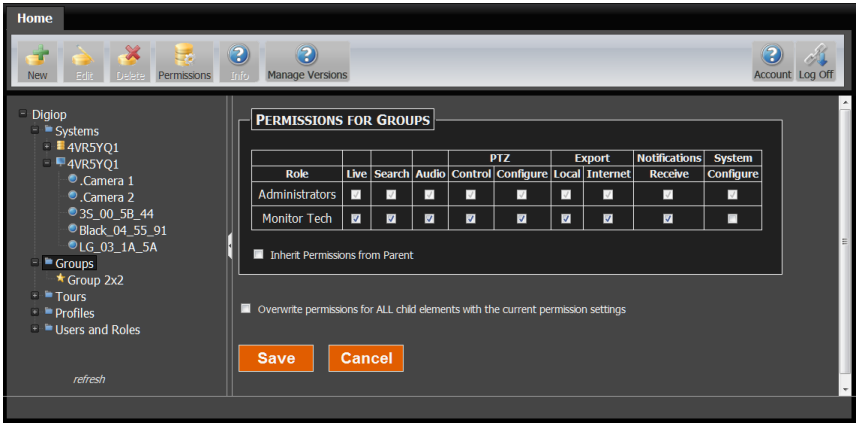
3.9.1 Group Permissions

To open the group permissions menu:

1. Click the **Groups** link in the left frame, then click the **Permissions** icon at the top of the window.

2. In the Permissions for Groups menu, select either option:

   Inherit Permissions from Parent - Inherit the permissions of the device at the highest level in the tree. Deselecting this option enables you to set specific permissions for Groups.
   Apply Permissions to All Children - Permissions set for a device at a higher level of the tree are applied to all devices below that level.

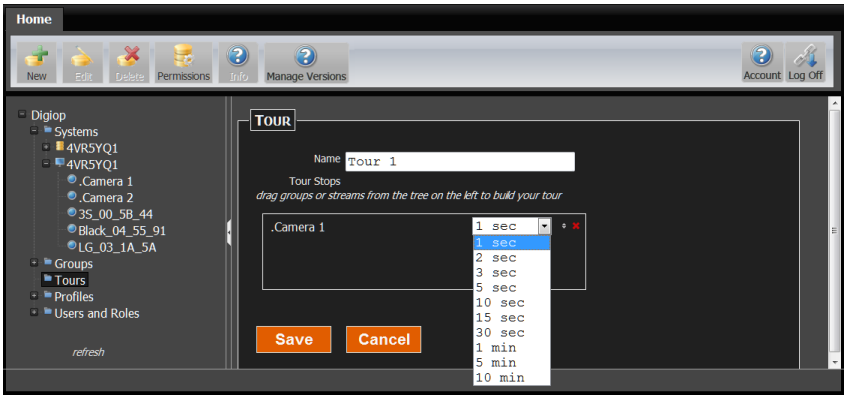


3. Click **Save** to update DIGIOP® Control.

3.10 Create Tour

A Tour is a collection of groups that are displayed individually and sequentially with a pause time (dwell) on each group. The dwell time for each group display can be either 1 sec, 5 sec, 10 sec, 30 sec, 1 min, or 5 min.

1. Click the **Tour** entry in the left frame of the Home page, then click the **New** button at the top of the window.



2. In the Tour settings window, enter the name of the tour in the **Name** field.

3. Add a camera or group to the tour by dragging an element from the tree on the left.

4. Click the down arrow to the right of the group name, then select the dwell time for the group.

5. Repeat the two steps above to add additional cameras or groups to the tour. The Tour configured below includes four cameras with a dwell time of 5 or 10 seconds.

6. Click **Save** to update DIGIOP® Control. If DIGIOP® Connect is monitoring the system, click **Refresh** in Connect to update the Tour information.

You can Edit/Delete the tour by clicking the clicking the tour name, then clicking the Edit/Delete buttons at the top of the window.

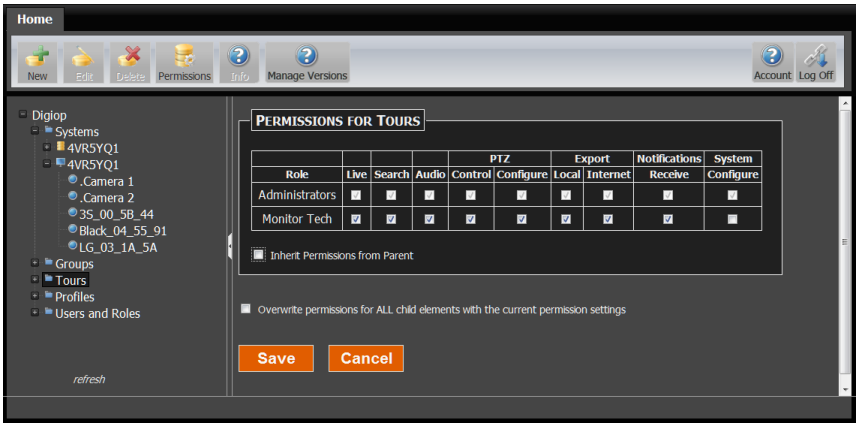
3.10.1 Tours Permissions

To open the Tours permissions menu:

1. Click the **Tours** link in the Home page Permissions list.

2. In the Permissions for Tours menu, select either option:

   Inherit Permissions from Parent - Inherit the permissions of the device at the highest level in the tree.
   Apply Permissions to All Children - Permissions set for a device at a higher level of the tree are applied to all devices below that level.

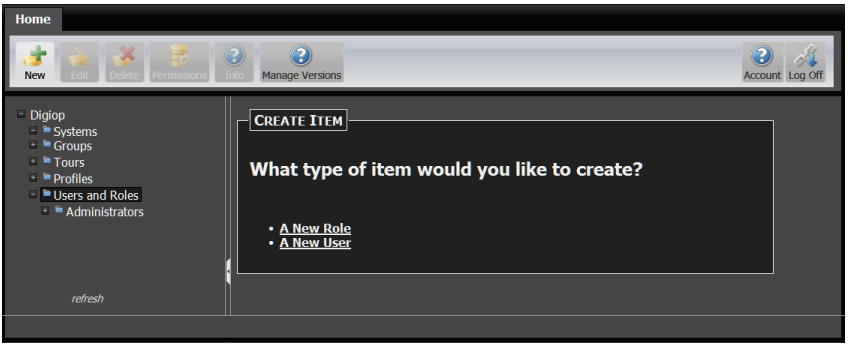


3. Click **Save** to update DIGIOP® Control.

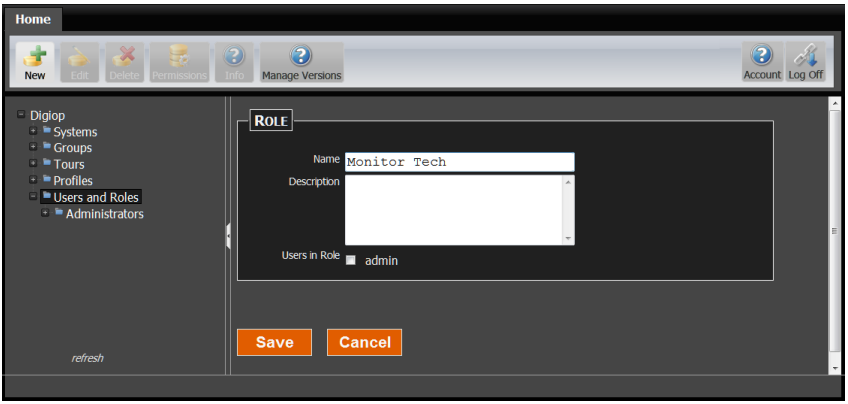
3.11 Create Role

Create Role is used to create classes of users who manage or view the system. Each role as has a specific set of permissions. User identities are each assigned some role when they are created. Initially, only an Administrator Role is established in the system. To create a Role:

1. Click the **Users and Roles** entry in the left frame of the Home page, then click the **New** button at the top of the window.



2. In the Create Item frame, click **A New Role**.



3. In the Role menu, enter the name of the Role in the **Name** field.

4. Enter a description of the role in the space provided.

5. Select the users who will be given the permissions of this role.

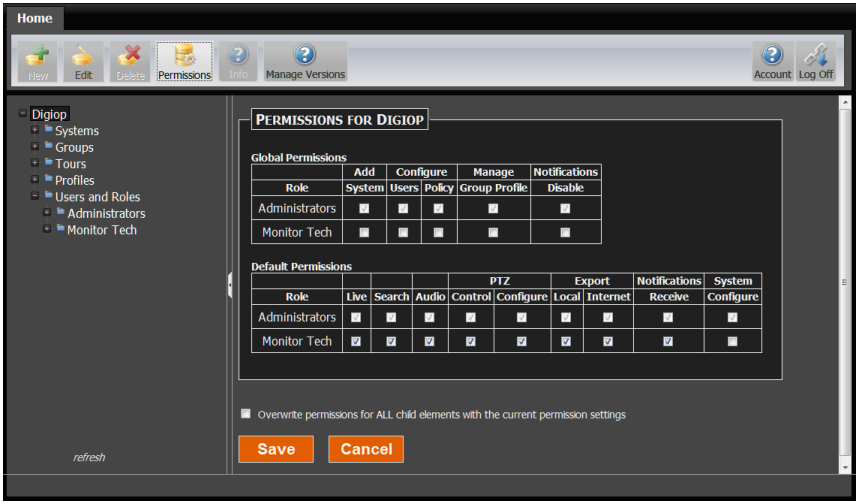
6. Click **Save** to update DIGIOP® Control.

3.11.1 Set Permissions for Roles

After a role is created, or if a Role needs to be modified, open the Customer Permissions window to set the permissions assigned to the Role:

1. Click the **Digiop** (Customer) entry at the top of the tree in the left frame, then click the **Permissions** icon at the top of the window.

2. In the **Permissions for Digiop** frame, assign permissions to each role by clicking the checkbox associated with the function of the role.



3. Click **Save** to update DIGIOP® Control.

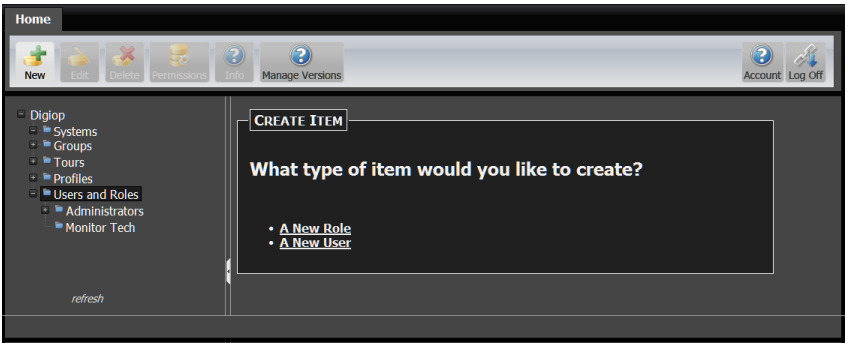
3.12 Create User

Create User is used to create a user Username and Password, and assign a Role (permissions) to the user. By default, one user, **admin**, with password **admin** and the role **Administrators** (full system permissions), is provided. DIGIOP strongly recommends that the default **admin** password be changed to improve system security.

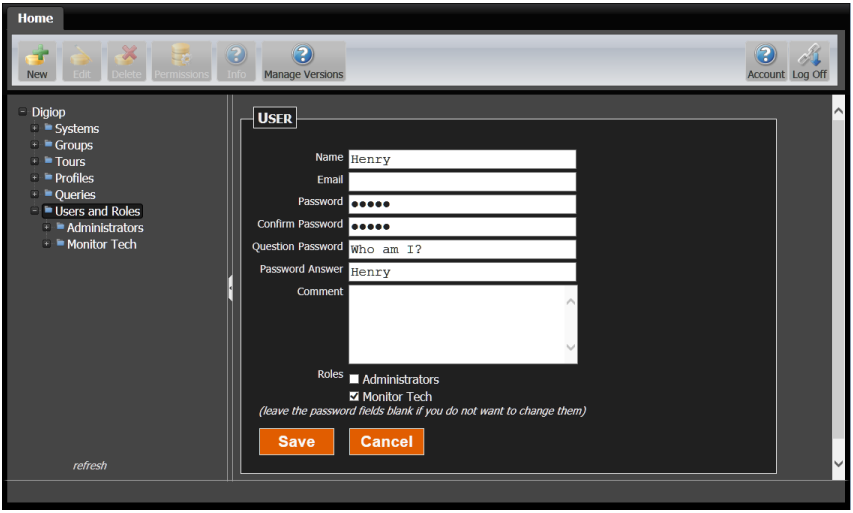
NOTE *To change the **admin** password, expand the **Administrators** role tree in the left frame, click **admin**, then click the **Edit** button. Change the password on the edit menu, then click **Save**.*

To create a User:

1. Click the **Users and Roles** entry in the left frame of the Home page, then click the **New** button at the top of the window.



2. In the Create Item frame, click **A New User**.



3. In the User settings window, enter:

   Name
   Email address
   Password and Confirm Password
   Security Question and Answer
   Comments if needed

4. Click the **Role** to assign to the user. Note that in the window above, Henry was given the Monitor Tech role.

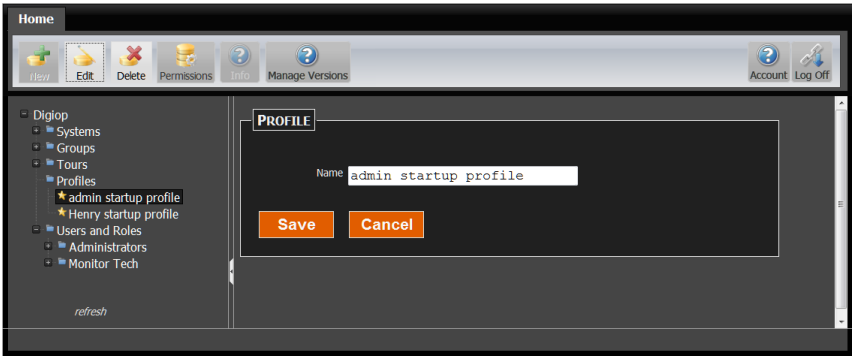
5. Click **Save** to update DIGIOP® Control.

3.13 User Profiles

Users with administrative privileges can create user profiles through DIGIOP® Connect. Profiles are pre-configured display setups that appear when the user (Username) logs into DIGIOP® Connect, or refreshes the Connect display. These user profiles appear within DIGIOP® Control as "<username> startup profile", where only the profile name can be changed.

To change the profile name, do the following:

1. Click the **Profiles** entry in the left frame of the Home page, then click the profile name you want to change to highlight it.



2. Click the **Edit** button.

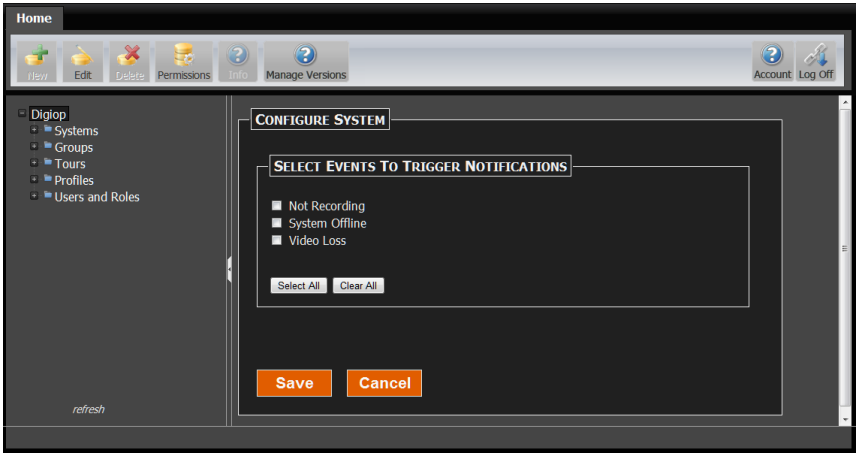
3. Change the name to what you prefer, then click **Save**.

3.14 System Event Notifications

Systems hosted by DIGIOP® include the Notifications feature, which reports certain video server events to the user through DIGIOP® Connect. Notifications are configured through DIGIOP® Control and apply to all servers under the Customer name. To configure Notifications:

1. Click the Customer Name object in the left pane to select it. The Customer name is at the top of the object list.

2. Click the **Edit** button at the top of the window to open the Notifications configuration menu.



The current DIGIOP ELEMENTS™ V8.8 supports the following Notifications Event types:

- **Not Recording**: The server stopped recording to the database. This event is reported when it occurs, and once per hour during a sustained outage.
- **System Offline**: (DIGIOP® hosted systems only) The system does not respond to a ping command. This event is reported when it occurs, and once per day during a sustained outage.
- **Video Loss**: No video signal was received by the DVR. This event is reported when it occurs, and once per hour during a sustained outage.

3. In the menu that opens in the right pane, select or deselect the system events you want to report through DIGIOP® Control Notifications. You can change the number in the Desired Days of Recording Not Achieved field.

4. Click **Save**.

3.15 Add data server streams

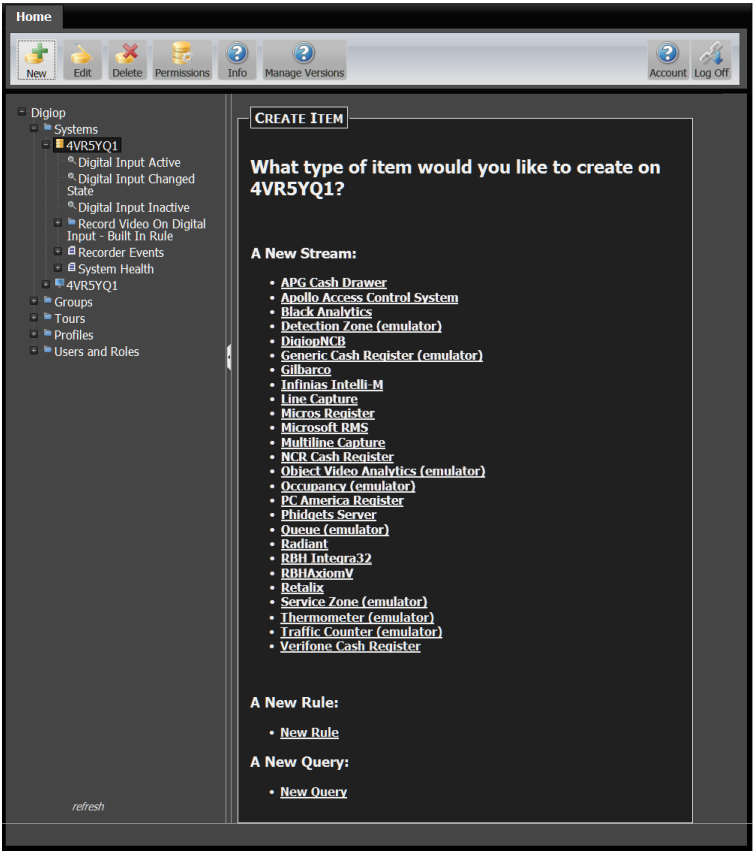
The DIGIOP® Data Server feature for DIGIOP® Control integrates several back-office systems with the video, audio, and data capture capabilities of the system.

NOTE *Refer to the appendix **Data Server Streams** in this document for more information about preset data stream options.*

To add data server streams to DIGIOP® Control:

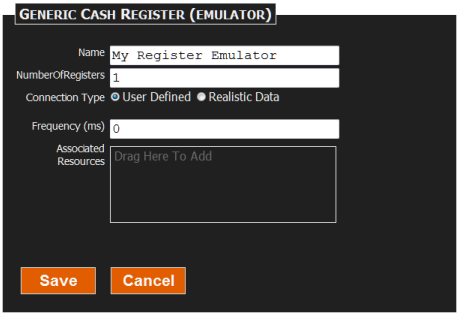
1. Open the Systems list, then click the hostname of the data server.

2. Click the **New** button at the top of the Home page. The Create Item pane will open in the right frame.



3. Click the **New Stream** data stream you want to add to the server. A properties window will open.

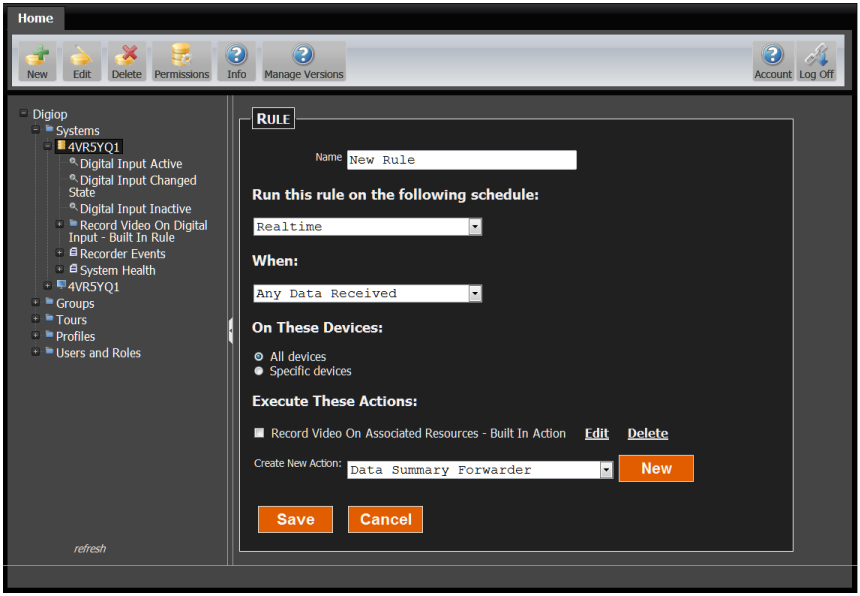
4. In the properties window for the data stream (see below for a Generic Cash Register (Emulator), enter the appropriate parameters, then click **Save**.



3.15.1 A New Rule

DIGIOP® Control allows Admin users to configure a rule. When a rule is violated, the action configured with it is performed. The action can send an email notification, data to the notification tab, forward counts to an FTP site, Digital Output, Recorder/Camera Digital Outputs and video sensors. When DIGIOP ELEMENTS™ is integrated with infinias™ Intelli-M Access, Control can also send event information to Intelli-M Access.

To setup a rule, click **New Rule** on the Create Item menu. For more information about creating and using rules, refer to "SECTION 5 Create a Rule or Query" on page 51.

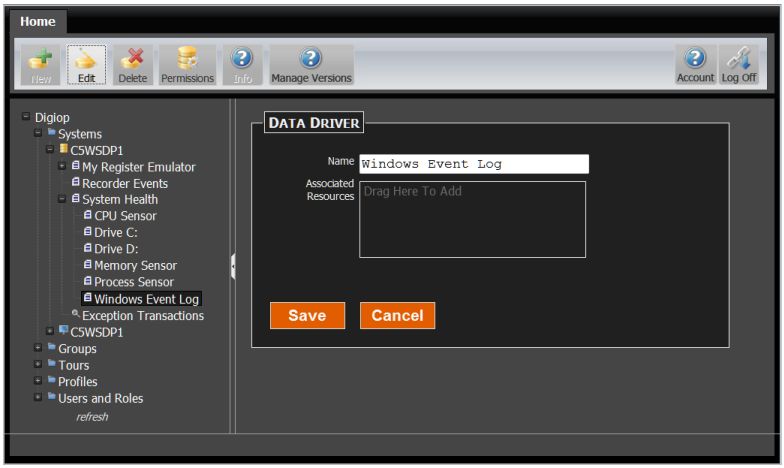


3.15.2 Data server Recorder Events

Recorder events display shows the occurrence of I/O events, Recording start/stop, and Recorder exit.

3.15.3 Data server System Health

The data server System Health entries (data drivers) offer several system related reports that can be named and associated with other resources. Each report option can be edited, deleted, or restricted through permissions. System Health data drivers are viewed with DIGIOP® Connect.



Data Server System Health Data Drivers

3.15.4 Fraudulent exception transactions

A fraudulent exception transaction is a custom query that utilizes an exception transaction (Voids, Discounts, Returns, and No Sale events, etc.) and a occupancy analytic to determine if the transaction could possibly be fraudulent. It associates an occupy zone from DIGIOP Black Analytics with a Cash Register. The logic is that there should always be someone occupying the zone (where a customer should be standing or a service point) when an exception transaction is registered. If no one is in the occupy zone at that time, it is considered fraudulent behavior and generate a Fraudulent Exception Transaction.

3.16 Recorder Events

Recorder events appear as Digital Inputs in the DIGIOP® Control object tree that are automatically created when a hardware sensor input contacts close (activate). There are three kinds of hardware sensors:

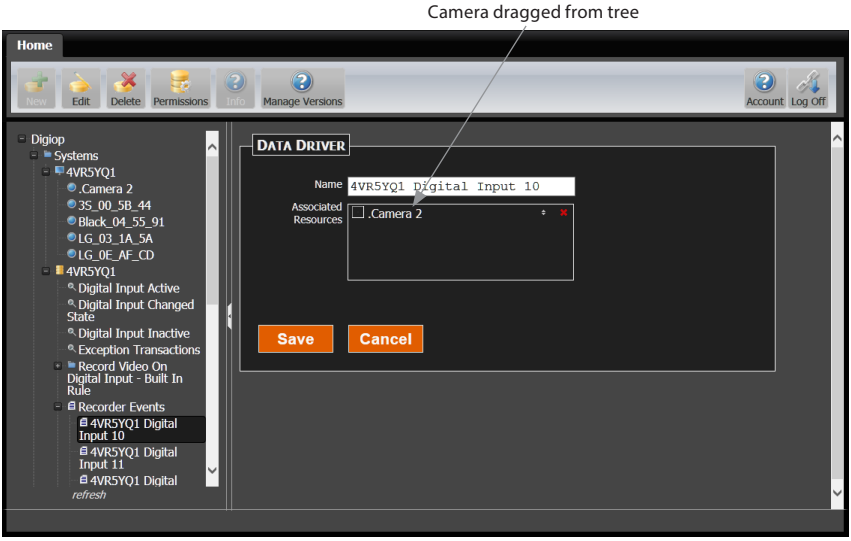
- Sensor inputs on a server chassis (expansion) board (see the hardware quick start guide for your server)
- Digital inputs to IP cameras
- Phidgets digital input hardware

3.16.1 Trigger recording on sensor input (hDVRs only)

Digital Inputs to the server hardware sensor board are useful for triggering cameras to record when the sensor becomes active. Because DIGIOP® Control is preset with the rule to **Record Video On Digital Input**, associating a camera with a digital input (Recorder Event) can trigger DIGIOP® Control to record the channel. The digital inputs to the sensor board must be activated at least once before they appear in the DIGIOP® Control Recorder Events list (see below). To configure a camera to record on sensor input, do the following:

NOTE *The rule **Record Video On Digital Input** can be configured to execute an action when any on of the following conditions occur: Always, Any Data Received, Digital Input Inactive, Digital Input Active, Digital Input Changed State. Refer to* "SECTION 5 Create a Rule or Query" on page 51 *for more information.*

1. Open the DIGIOP® Control Video server object tree to list the cameras configured in the system.



2. Open the Data server object tree, then open the Recorder Events list.

3. Click (select) the Digital Input with the number of the sensor input that will trigger recording.

4. Click the **Edit** button to open a Data Driver menu for the Digital Input.

5. Drag the camera you want to record from the object tree to the Associated Resources box in the Data Driver menu of the Digital Input.

6. Click **Save**.

SECTION 4
Data Server Streams

The DIGIOP® Data Server includes several preset data steams. Each data stream includes parameter settings that are displayed and usually setup when the stream is added to the server.

4.1 About Associated Resources

Associated Resources allow users to associate a channel(s) of video with a data stream. For instance, users can associate a camera at a cash register, with a POS transactional data stream. At a more advanced level, users can associate a camera with an I/O device that can trigger recording, or associate an analytics counting device (camera) with a cash register to detect possible Fraudulent Exception Transactions.

Associated Resources entry boxes are included in all Data stream menus. To associate a camera with a data stream, drag the camera from the object tree into the Associated Resources box.

4.1.1 I/O triggering a video channel to record

An I/O device, such as a Phidgets USB, can be setup to trigger a camera channel to record video when the state of its digital input changes. For instance, when configuring a Phidgets Server stream, DIGIOP® automatically creates a Record Video action to record video when the state of the digital input changes from inactive to active. The recording is made on the channel of the camera associated with the stream.

4.1.2 Fraudulent Exception Transactions

When adding a cash register data stream, DIGIOP® automatically creates the filters Exception Transaction and Fraudulent Exception Transaction.

An Exception Transaction is any transaction that is not completed by normal means (Void, Cancel, Returns, No Sale, Discounts, etc.). This is typically the transaction type used when theft is involved.

A Fraudulent Exception Transactions associates a presence zone from an analytics data stream, with a cash register. The assumption here is that if an Exception Transaction occurs when no one is in the presence zone from the analytics device, fraudulent behavior may have occurred. The presence zone is usually placed at a point of service, or where a customer is expected to be standing.

The Exception Transaction query will automatically work; however, the Fraudulent Exception Transaction Filter Query will only work when a cash register data stream gas associated with it an analytics device.

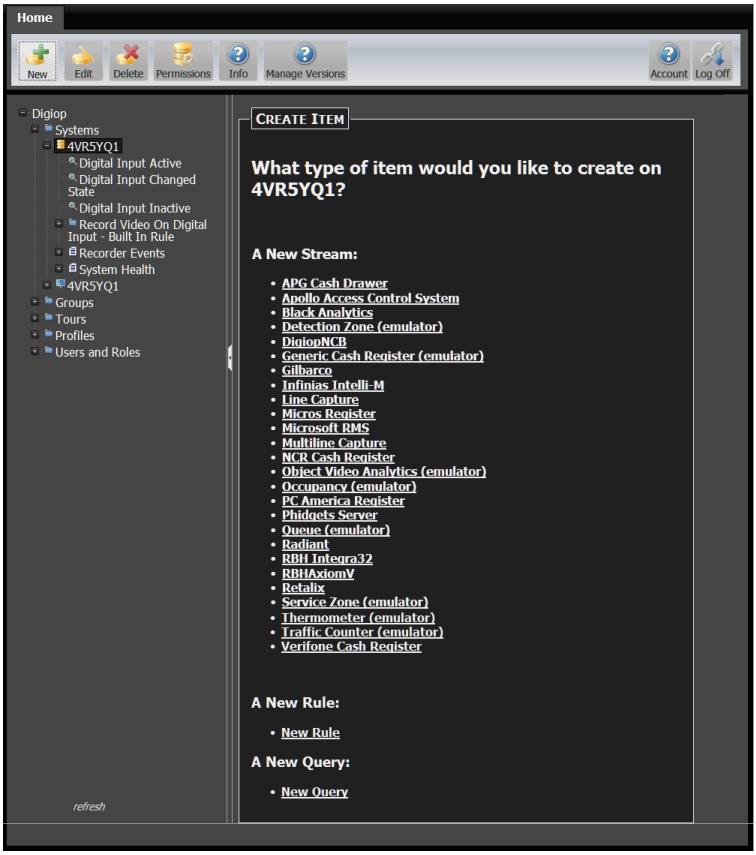
4.1.3 Conversion Rate

DIGIOP® automatically associates a counting device and with a cash registers and calculates the conversion rate (ratio of how many transactions were made to how many entered the store). Conversion rate statistics are display it in DIGIOP® Connect with the total sales, dollars per shopper and dollars per transaction.

NOTE *Use thee the live filter query to remove analytics counting devices not be used to count shoppers entering the store.*

4.2 Data streams

Data stream configuration menus are listed by clicking a Data Server icon in the object tree, then clicking the **New** button.



For information about creating a Rule or and Query, see "SECTION 5 Create a Rule or Query" on page 51.

4.2.1 Emulators

DIGIOP® Data Server includes the following emulators for developing and testing data capture configurations. These emulators produce streams of ASCII data to simulate several different device types.

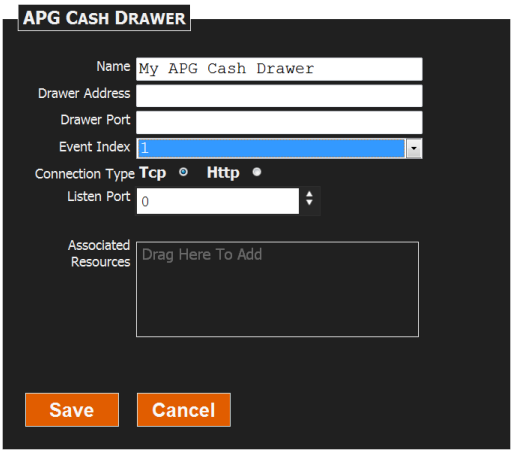
- **Detection Zone**
- **Generic Cash Register** - POS data emulator with which a user can create POS data without a data license. This will allow users to have data for demo purposes or for test driving the filter query features in DIGIOP® Connect.
- **Object Video Analytics -** traffic counter and occupancy data emulator that any user can create without a data license. This will allow users to have data for demo purposes or for test driving the filter query features in DIGIOP® Connect.
- **Queue**
- **Service Zone**
- **Thermometer**
- **Traffic Counter**

4.2.2 Pre-configured data streams in DIGIOP® Control

Following is a summary of most pre-configured data stream setup menus. For data streams not listed in the Data Server Create Item window, please contact DIGIOP® Support.

APG Cash Drawer

This data stream captures information from APG Cash Drawer point-of-sale devices.

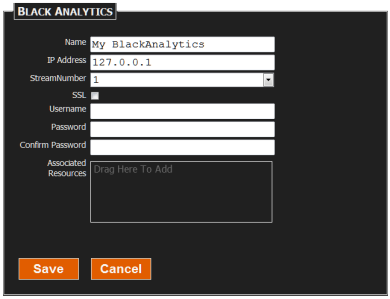


Parameter settings:

- Name assigned to the data stream
- Drawer address and port
- Event index (1 .. 6)
- Connection type (TCP or Http). For TCP connections, enter the parameter:
  - Listen Port
- For Http connections, enter the parameters:
  - Address
  - Port
  - Username/password
- Associated resources

Black Analytics

This data stream captures digital analytics information from DIGIOP® Black cameras. The analytics can provide counts of traffic entered and traffic exited.



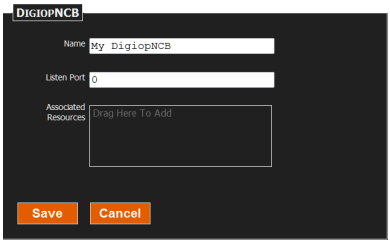
Parameter settings:

- Name – Name assigned to the camera
- IP Address – IP address of the camera
- Stream number – Camera stream. Use stream number = 1.
- SSL checkbox – For secure socket layer use.
- Username/password/confirm password – security credentials for the camera internal setup.
- Associated resources – Associated resources are used to configure fraudulent exception transactions.

DigiopNCB, Apollo Access Control Systems, Infinias Intelli-M, pcAmerica, Micros Register Server, Microsoft RMS, RBH integra32, Radiant (RFID), Retalix

DigiopNCB: This data stream captures information from the DIGIOP3D camera system. The analytics provide counts on traffic entered and traffic exited.

Infinias Intelli-M: Select this option for data stream capture from Infinias Intelli-M access control system.
pcAmerica: Select this option for data stream capture from the custom pcAmerica register.



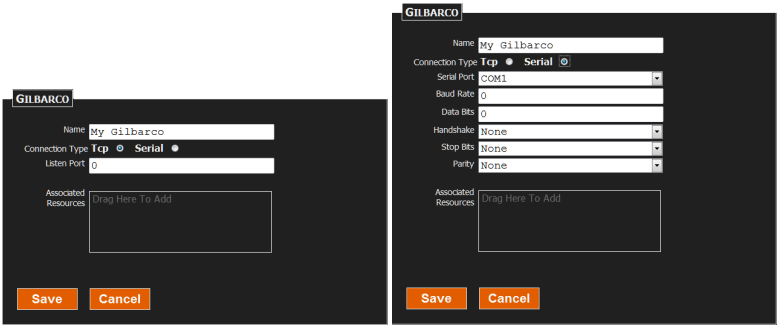
Parameter settings:

- Name – Name assigned to the device. This name will appear as an item under the data server in the left frame.
- Listen Port – The port through which DIGIOP® Control will receive data from the device. The IP address of the NVR/hDVR is configured in the device. Ensure that the port you select is open in hardware and firewalls.
- Associated Resources – Associated resources are used to configure fraudulent exception transactions. These items bind a device to an analytic event. To use this feature, drag the analytic device into the associated resource for the device.

NOTE *Analytic devices are devices associated with a resource to a POS system to monitor certain types of transactions.*

Gilbarco

Select this option for data stream capture from Gilbarco® devices.



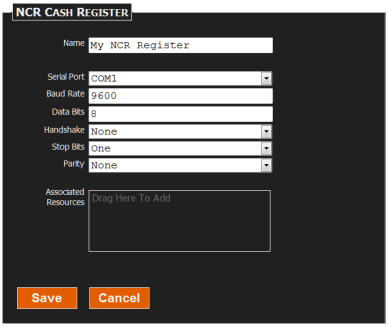
Parameter settings:

- Name – Name assigned to the cash register. This name will appear as an item under the data server in the left frame.

- TCP or Serial – Option to receive data through a TCP/IP or Serial interface.
- Listen Port – (for TCP connection type) the port through which the NVR/hDVR will receive data from the Gilbarco device. The IP address of the NVR/hDVR is configured in the device.
- Serial Port, Baud Rate, Data Bits, Handshake, Stop Bits, Parity – (for Serial connection type) Settings of the Gilbarco device serial port that is connected to the NVR/hDVR serial port.
- Associated Resources – Associated resources are used to configure fraudulent exception transactions. These items bind a device to an analytic event. To use this feature, drag the analytic device into the associated resource for the device.

NCR Cash Register

Select this option for serial data stream capture from devices such as the NCR® cash register.

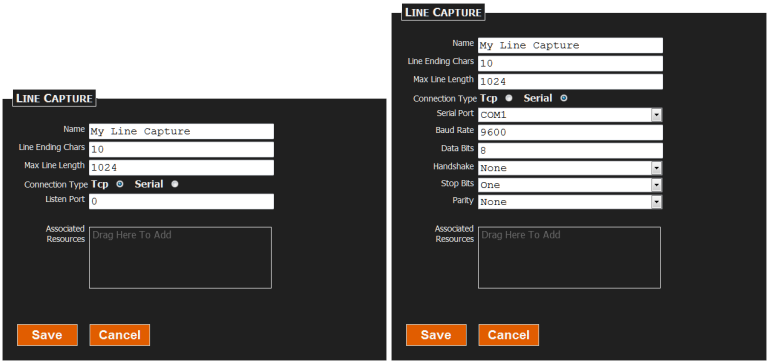


Parameter settings:

- Name – Name assigned to the cash register. This name will appear as an item under the data server in the left frame.
- Serial Port, Baud Rate, Data Bits, Handshake, Stop Bits, Parity – Settings of the cash register serial port that is connected to the NVR/hDVR serial port.
- Associated Resources – Associated resources are used to configure fraudulent exception transactions. These items bind a device to an analytic event. To use this feature, drag the analytic device into the associated resource for the device.

Line Capture

Line Capture is a generic driver for receiving live data from a register that is not yet integrated into DIGIOP ELEMENTS™.

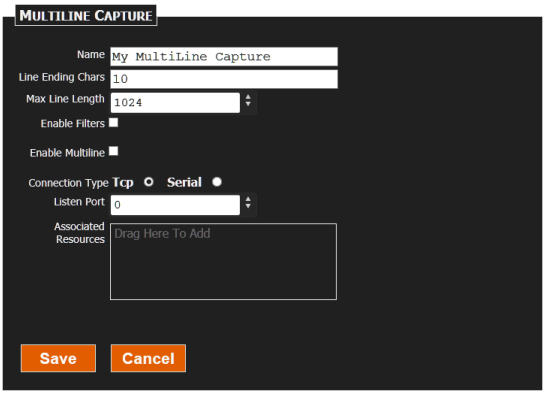


Parameter settings:

- Name – Name assigned to the line capture data. This name will appear as an item under the data server in the left frame.
- Line Ending Chars – Use default settings. Contact DIGIOP® support for more information.
- Max Line Length – Use default settings. Contact DIGIOP® support for more information.
- TCP or Serial – Option to receive data through a TCP/IP or Serial interface.
- Listen Port – (for TCP connection type) the port through which the NVR/hDVR will receive data. The IP address of the NVR/hDVR is configured in the sending device.
- Serial Port, Baud Rate, Data Bits, Handshake, Stop Bits, Parity – (for Serial connection type) Settings of the sending device serial port that is connected to the NVR/hDVR serial port.
- Associated Resources – Associated resources are used to configure fraudulent exception transactions. These items bind a device to an analytic event. To use this feature, drag the analytic device into the associated resource for the device.

Multiline Capture

The Multiline Capture rule detects target data within a data stream by searching for the beginning of a transaction string. Multiline Capture can block an entire transaction by identifying a Begin Transaction Strings. When that string of text appears in the data the last transaction closes and the new transaction begins. Searches can also filter data by normal expressions, and ignore alphabetic case (upper case or lower case) during searches.



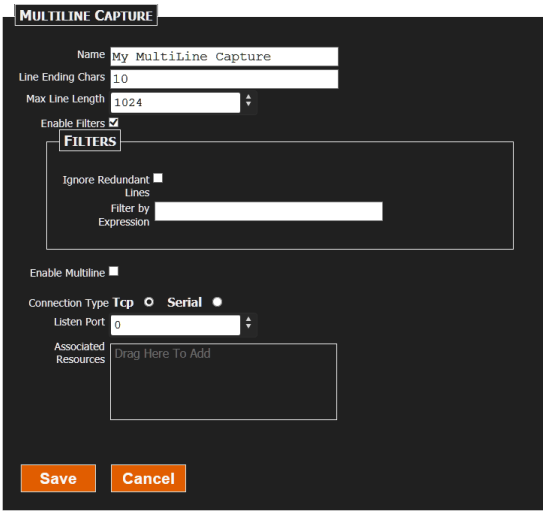
Parameter settings:

- Name assigned to the data stream, which appear under the Data Server in the Object Tree
- Line Ending Character, which use default settings (default = 10)
- Max Line Length, which use default settings (default = 1024)
- Enable Filters: Enables filters options. See below.
- Enable Multiline: Enables the Multiline capture features. See below.
- TCP or Serial, which configure an option to receive data through the selected interface.
  - For TCP communications, also include:
    Listen Port (for TCP/IP connection) - port through with the DVR or NVR receives data from the cash register; the IP address of the DVR or NVR is configured in the sending device
  - For Serial communications, also include: Serial Port, Baud Rate, Data Bits, Handshake, Stop Bits, Parity. These entries must match the settings of the sending device serial port that is connected to the DVR or NVR serial port.
- Associated resources (for configuring fraudulent exception transactions) bind a device to an analytic event and shall be used by dragging the analytic device into the associate resource for the device.

Multiline Capture - Enable Filters

When Enable Filters is selected, two options are available:

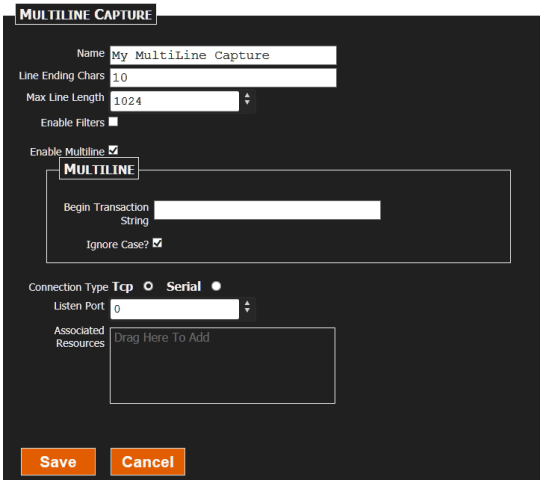
- **Ignore redundant**: Selecting this option will ignore redundant data from the data driver. For example, if data from a scale is monitored and the data received is continuous 0s (same value), only the first 0 is recorded. When the data from the device changes (for instance, something is placed on the scale or taken off the sale), only the first occurrence of the changed data is recorded.
- **Filter by Expression**: In this text field, you can filter data using a *"regular expression."* For information about *"regular expressions"*, see resources on the Internet, such as Wikipedia.



Multiline Capture - Enable Multiline

When Enable Multiline is selected, two options are available:

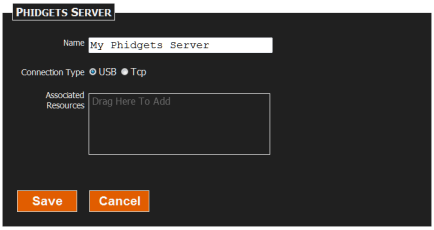
- **Begin Transaction String**: In this field, enter the character string that identifies the start of a new transaction. A new or additional search of subsequent data begins at that point.
- **Ignore case**: Select this option to ignore the case (upper case or lower case) of alphabetic data during the search.

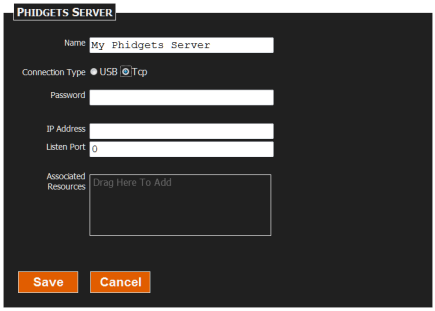


NOTE *You can use both **Enable Filters** and **Enable Multiline** when using this feature.*

Phidgets Server

DIGIOP® Control automatically finds the Phidgets InterfaceKit and digital inputs. When adding a Phidgets device, DIGIOP automatically creates a **Record Video** action to record video when the state changes from **Inactive** to **Active**. The only step required is to associate the desired camera with the Phidgets device. DIGIOP® Connect can show when the state of the input changes.





Parameter settings:

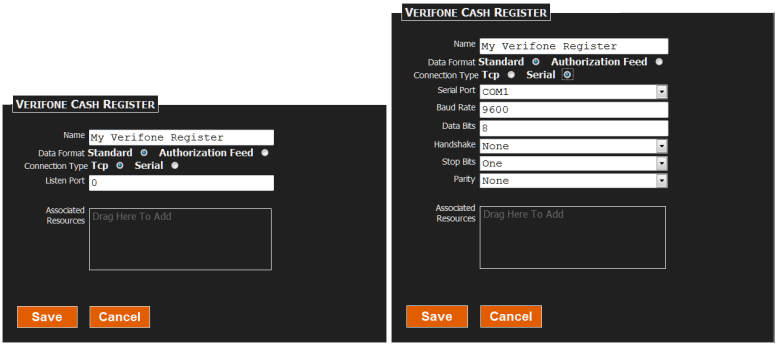
- Name – Name assigned to the Phidgets stream
- Connection Type – Select USB or TCP

For the TCP connections, the following additional parameters are required:

- Password
- IP Address –Network address of the server
- Listening Port – Port for transmitting information to the server
- Associated Resources – Use the Associated Resources feature to enable a Phidgets digital input event or alarm based to trigger a camera to record. To use this feature, drag the analytic device into the associated resource for the device.

VeriFone Cash Register

Select this option to receive a data stream from a VeriFone® cash register. This data stream can be received at the NVR/hDVR through either TCP/IP or Serial communication.



Parameter settings:

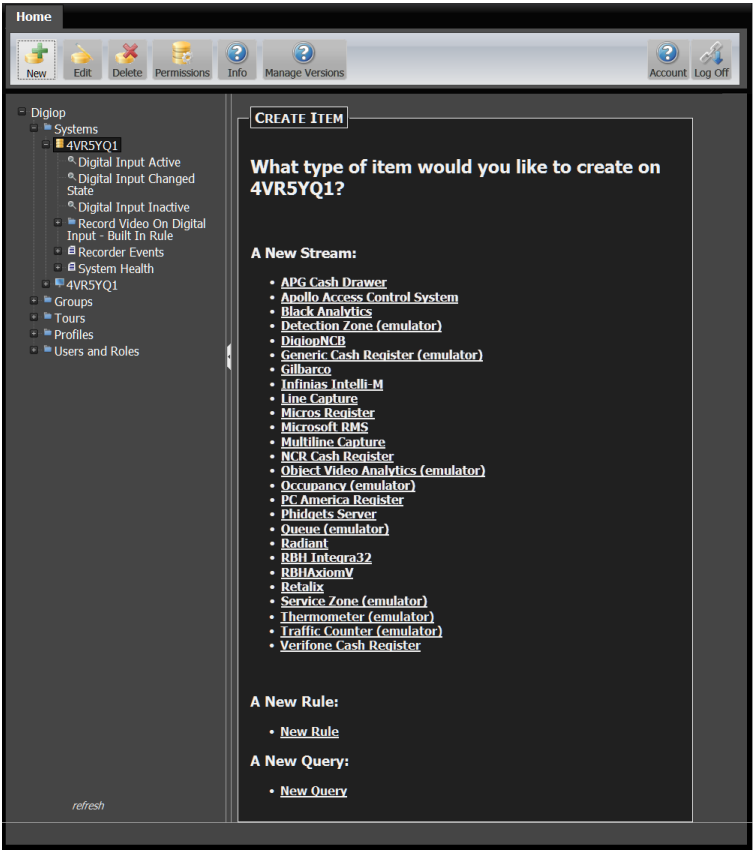
- Name – Name assigned to the cash register. This name will appear as an item under the data server in the left frame.
- Data Format – Select the Standard option unless notified by DIGIOP® Inc.
- TCP or Serial – Option to receive data through a TCP/IP or Serial interface.
- Listen Port – (for TCP connection type) the port through which the NVR/hDVR will receive data from the cash register. The IP address of the NVR/hDVR is configured in the cash register.
- Serial Port, Baud Rate, Data Bits, Handshake, Stop Bits, Parity – (for Serial connection type) Settings of the Verifone cash register serial port that is connected to the NVR/hDVR serial port.
- Associated Resources – Associated resources are used to configure fraudulent exception transactions. These items bind a device to an analytic event. To use this feature, drag the analytic device into the associated resource for the device.

SECTION 5
Create a Rule or Query

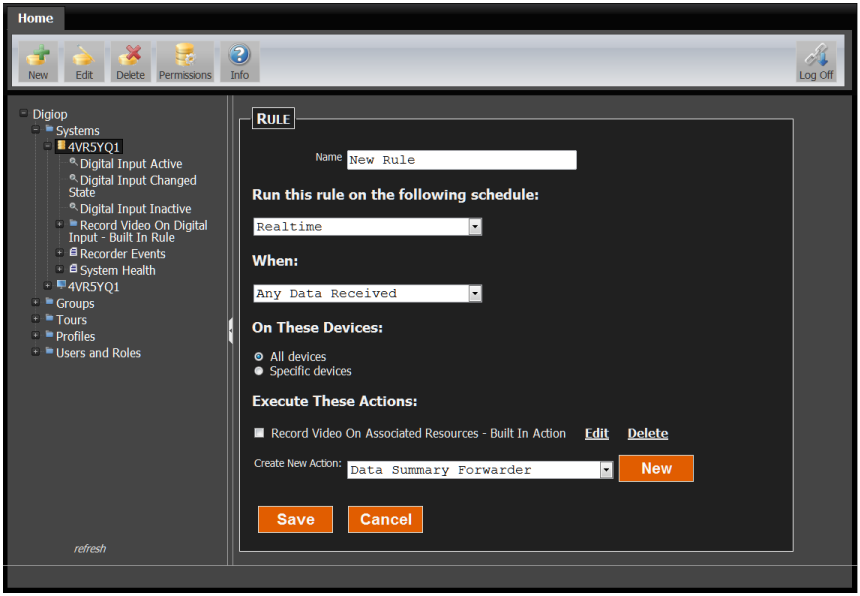
5.1 Rules

A rule is a condition that, when violated, produces a specific action. To setup a rule:

1. Click the **Data Server** icon in the left frame, then click **New**.



2. Click the **New Rule** link.



3. In the **Name** field, assign a Name to identify the rule.

4. In the **Schedule** field, open the drop-down list and select one of the options to determine when the rule is executed.

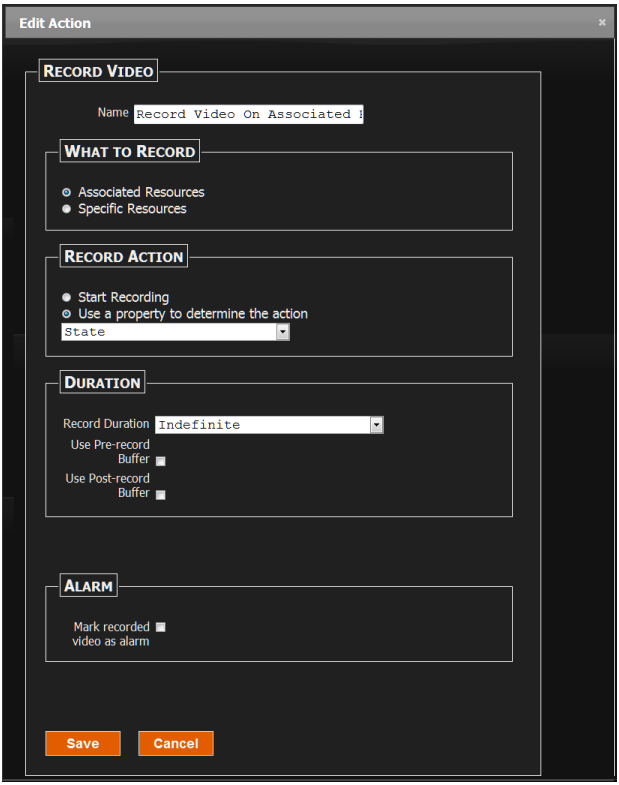
5. In the **When** field, open the drop-down list and select when the rule is executed per the schedule selected previously:

   - Always – The rule is always executed per the schedule
   - Any Data Received – The rule is executed when any data is received per the schedule
   - Digital Input Active – On of several Data server recorder events became active.
   - Digital Input Inactive– On of several Data server recorder events became inactive.
   - Digital Input Changed State– On of several Data server recorder events became active or inactive.

6. In the **Device** list, select the option that applies to the rule.

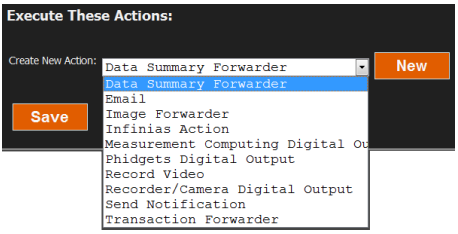
7. In the **Execute These Actions** section, several options are available:

   a. You can check the box for **Record Video On Associated Resources**, and **Edit** that action. If you click Edit, the following screen will open.

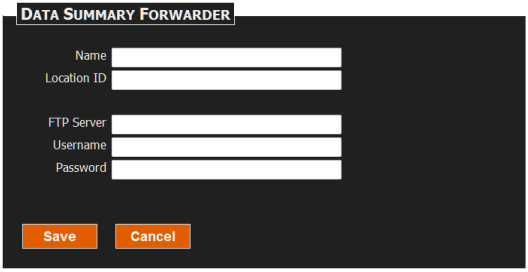


In the window above, select the options as needed, then click **Save**. Contact your distributor for more information.

b. You can open the Create New Action drop-down list, then click New to define the action to perform when the device triggers.



i. **Data Summary Forwarder** – This action allows you to setup a scheduled task that will forward a summary of event data from any data stream to a FTP site. Data are visible in XML format.

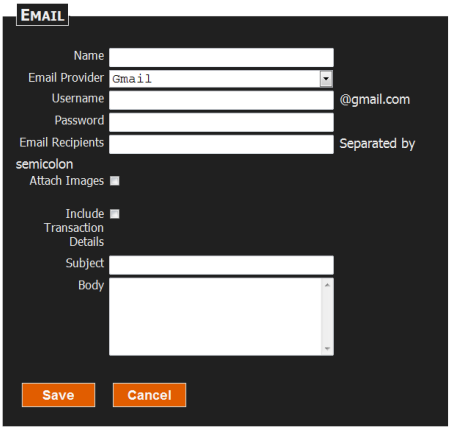


Parameter settings:

- Location ID – Store number or register data ID.
- FTP Server – FTP server address.
- Username/password – Username and password for access to the FTP server.

Configure the parameter settings on the Edit Action menu, then click **Save**.

ii. **Email** – The Email action generates and sends an email message when a Rule is violated.



Parameter settings:

- Name – Unique name of the action.

- Email Provider – Email SMTP server address. **NOTE**: This field, and related fields on the menu, default to a GMail template. If not using a GMail account to send the email, open the drop-down menu and select **Other**, then specify the SMTP server and account parameters requested in the menu.
- Username/password – Username and password for access to the SMTP server.
- From – Sender email address.
- Email Recipients – List of recipients email addresses. Each email address is separated by a semicolon (;).
- Subject – Subject line of the email.
- Body – Message body of the email.

Configure the parameter settings on the Edit Action menu, then click **Save**. Below is an example of an Email sent as a result of a rule.

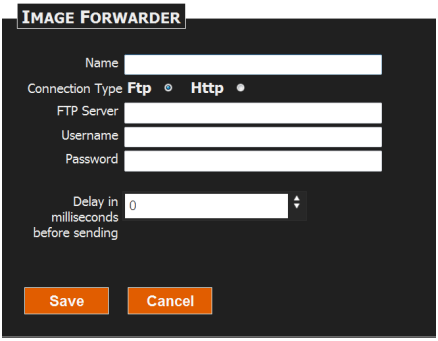
From: digiopemail@gmail.com
Date: April 10, 2013, 7:47:16 PM EDT
To: tim@yahoo.com, christy@gmail.com
Subject: Garage Door Opened.

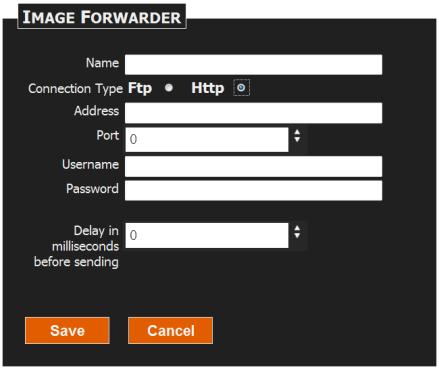
Tim & Christy's Garage Door opened. I'm attaching images for you to take a look...

=== Relevant Transaction Items ===

[4/10/2013 7:47:05 PM] - Active

iii. **Image Forwarder**– This action performs an FTP upload of an image when an event is triggered

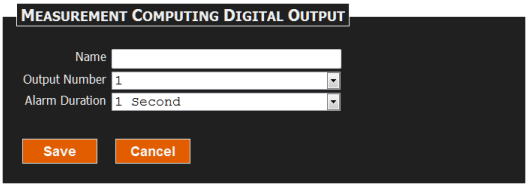




Parameter settings:

- Name associated with specific action
- Connection type (FTP, HTTP)
- FTP Server (address of the FTP server)
- Username/Password (to access the FTP server)
- Delay in milliseconds before sending

iv. **Measurement Computing Digital Output** – This driver is for Measurement Computing USB Digital I/O devices, which can be found at http://www.mccdaq.com/solutions/USB-Digital-IO.aspx.

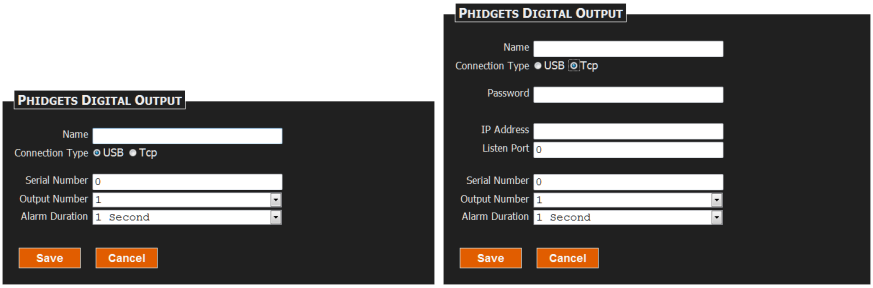


Parameter settings:

- Name – Assign a unique name to this action.
- Output Number – Select a digital output number from the drop-down list.
- Alarm Duration – Length of time the output is activated.

Configure the parameter settings on the Edit Action menu, then click **Save**.

v. **Phidgets Digital Output** – The Phidgets Digital Out action enables you to setup the digital output from a Phidgets device when a Rule is violated. There are two connection types: USB and TCP.



Parameter settings:

- Name – Unique name for this stream.
- Connection Type – Select USB or TCP (Ethernet)

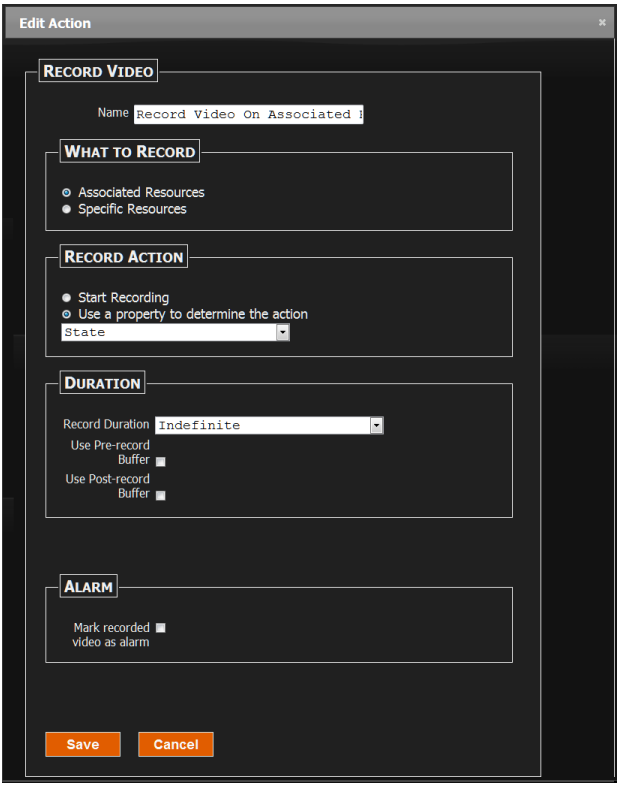
USB parameters: plug in the USB device and DIGIOP will automatically detect the Phidgets interface kit and create a rule and action to record video.

TCP parameters

- Password – password of the Phidgets software
- IP Address – IP address of the server
- Listen Port – port on which data is being sent
- Serial Number – serial number of the Phidgets I/O device
- Output Number – output being used
- Alarm Duration – length of the alarm

Configure the parameter settings on the Edit Action menu, then click **Save**.

vi. **Record Video** – This action allows you to specify a recording action triggered by an event or alarm. Cameras, I/O devices, and data streams can be associated with this action.



Conditions of Record Video action:

› **Name**- Give the action a unique name

What to Record- What resources are used in this action

› **Associate Resources**- Records the resources associated with the device causing the event. For example, if the rule is violated by a POS device, we might want to record all of the cameras associated with that device.
› **Specific Resources**- Select the specific resources that you want to use.

Record Action- Defines what will trigger the recording

- **Start Recording**- Will record on any event
- **Use a property to determine the action**- This option allow you to select a specific property from the data to start recording and stop recording. Recording will start if property is true (or non-zero), and stop if property is false or 0.

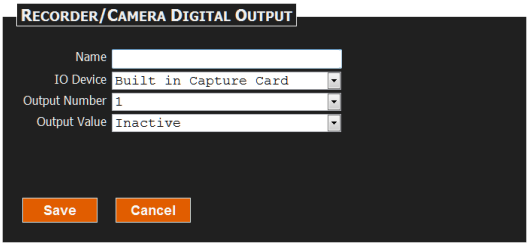
Duration - How long the event or alarm records.

- **Record Duration**- Select Indefinite to record until the state changes, or select a specific duration.
- **Pre and Post Buffer** - This condition is base on the Pre and Post camera settings of the associated resource.

Alarm - Identifies the recording alarm based, instead event based. The video will appearing red in DIGIOP® Connect.

In the window above, select the options as needed, then click **Save**. Contact your distributor for more information.

vii. **Recorder/Camera Digital Output** – This action allows you to configure the digital output state of a camera when a violated Rule. The event will appear as a Custom event in DIGIOP® Control.

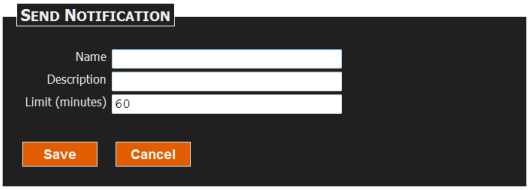


Parameter settings:

- Name – Name you assign to the Recorder/Camera Digital Output action
- I/O Device – I/O capture card or configured camera
- Output Number – Output number of the I/O device.
- Output Value – State of the output (active or inactive)

Configure the parameter settings on the Edit Action menu, then click **Save**.

viii. **Send Notification** – This action allows you to configure a Rule action to send a notification to the Notifications tab in DIGIOP® Connect.

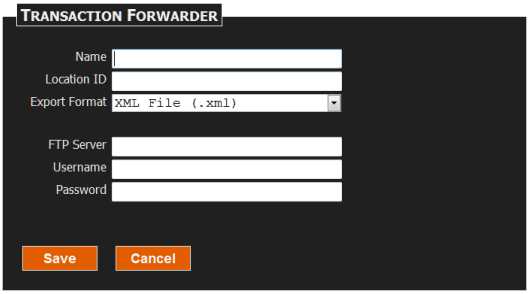


Parameter settings:

- Name – name you assign to the Notification action
- Description – description of notification in client software. If blank, custom
- Limit - frequency at which a notification will appear in the client software

Configure the parameter settings on the Edit Action menu, then click **Save**.

ix. **Transaction Forwarder** – sends all event data to an FTP site in XML or CSV format.



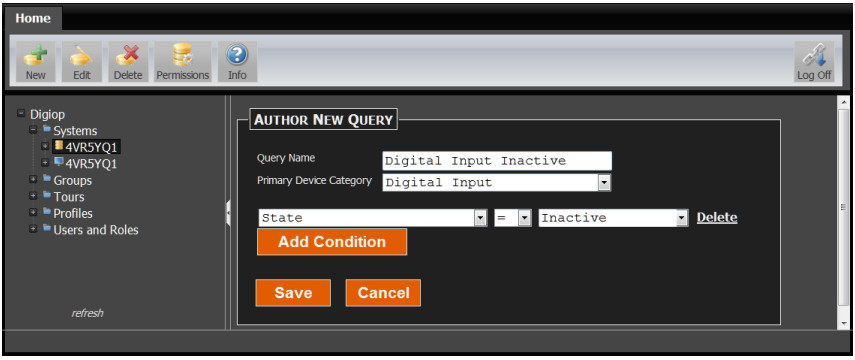
Parameter settings:

- Name – Unique name you assign to this Transaction Forwarder action.
- Location ID – exact location of FTP site
- Export Format – XML or CSV
- FTP Server – FTP server address. For example, *ftp.companyA.com*
- Username – Username of FTP server account
- Password – Password of the FTP server account

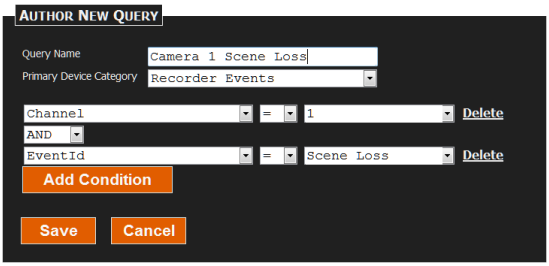
Configure the parameter settings on the Edit Action menu, then click **Save**.

5.2 Custom Query

A Query is a test applied to some condition or conditions of some device category in the system, such as a Digital Input, Process Sensor, Recorder Event, etc. For instance, the following preset query, *Digital Input Inactive*, tests the state of the associated digital input. A Query can be created for any data stream.



When constructing a query, many conditions can created using and/or (Boolean) logic to produce a true or false (met or not met) result. For instance, the following query, Camera 1 Scene Loss tests for two recorder event conditions: Channel = 1 and EventID = Scene Loss.

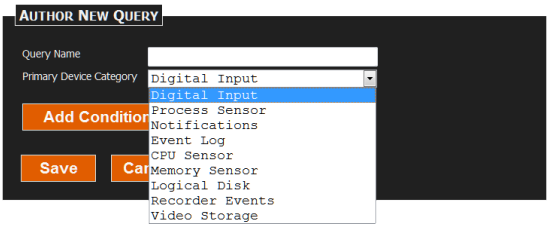


NEW QUERY

To create a new query:

1. Click the **Data Server** icon in the left frame, then click **New**.
2. Scroll down and click **New Query**.

3. In the window shown below, enter a name in the **Query Name** field, then open the **Primary Device Category** drop-down list to select a category.



4. Click **Add Condition**.

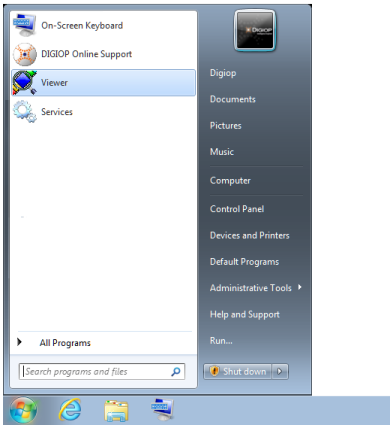
5. On the condition line, open the drop-down list on the left to select a variable, select the boolean operator from the drop-down list in the middle, then open the drop-down list on the right to select the status, or enter a value.

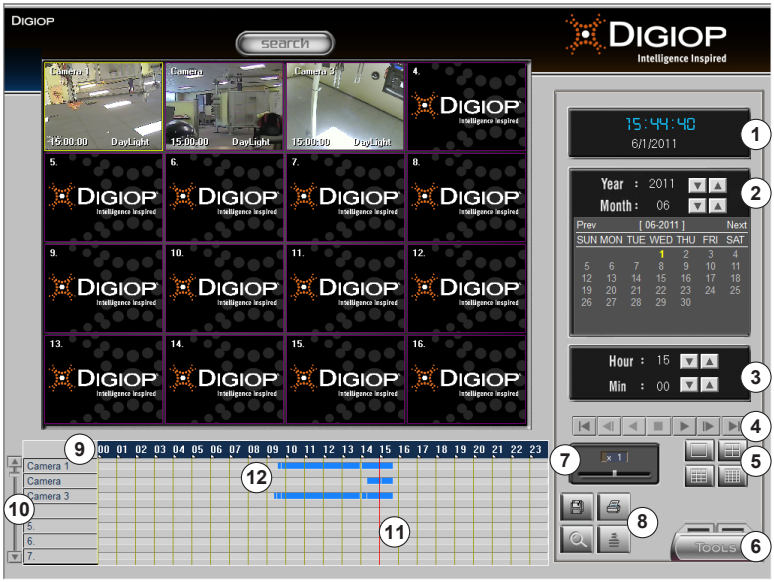
6. Add additional conditions as needed to form a precise boolean construct to test. All conditions are and'ed or or'ed together.

7. Click **Save**. The queries you defined and those provided by default in the system are listed under the Data Server icon in the left frame.

SECTION 6
Using Viewer

Viewer is a video search and backup utility that resides on the NVR or hDVR server. It is opened through the start menu.





NOTE *By default, Viewer opens at the end of the current recorded files. No new recording occurs while the Search is running.*

Table 1. Search preferences

Item	Name	Description
1	Current Date & Time	Displays the PC date and time
2	Record calendar	Use the calendar to find recorded video on the desired search date. Use the Prev(ious) or Next links to move the months forward or backward in time. Use the Up/Down arrows to adjust the Year and Month. Date codes: Pink – recordings available on that date Yellow – currently selected date Grey – no recordings on that date.
3	Time Line (Hour/Min)	Displays the current system time. Clicking anywhere on the time line causes the Scan Bar to jump to that position/time. Use the Hour and Minute up/down arrows to locate known records. This option is synchronized with the Scan Bar so any change to the Scan Bar position will be reflected here.
4	Playback Controls	Play, Stop, Pause, FWD, Step Forward, Step Backwards. See the section "Playback Controls" in this guide for more information about these controls.
5	Screen division display	Switches from 1, 4, 9, or 16 images. Individual images can be removed from the split screen by clicking the camera button (left of the graphical record log). The selected Screen Mode is highlighted.
6	Tools (Search)	Provides access to tools for doing searches, which include Image Processing, Smart Search, Hour Search, Search, Configuration, POS, and Image. For information about each of these tools, see the section "Search Tools" in this guide.
7	Playback speed	Lets you choose forward or playback at speeds of 1/8X, 1/4X, 1/2X, 1X, 2X, 4X, and 8X real-time speed. To adjust the playback speed, either drag the slide control or click on the slide control bar. The speed is displayed in the playback window.
8	Print, Zoom, De-interlace, Image/Video Backup Controls	Print – Prints the image
		Image Zoom – Magnifies the image in 48 incremental steps. Right-click with the mouse. When you place the mouse over the image, the cursor changes to the +/- magnifying glass. Clicking the left mouse button zooms out to a 1:1 ratio. By moving the mouse to different areas of the image, you can zoom in on parts on the image that you need to look at in more detail. This means that the zoom does not need to be centralized in the middle of the screen to work. See the section "Zoom" in this guide to see a zoomed image.
		Image/Video Backup – Lets you access several options for copying images (other than HOUR BACKUP), including: Video Backup (DSF format and viewer); Still Image Backup; Standard format (MPEG format)
		Interlace/Deinterlace (4CIF) – (Only applies to the S-Class systems when processing 4CIF recorded data) When printing the interlaced fields 4CIF images where the source was a dynamic (moving) image, the DVR captures "Even" and "Odd" fields to create the frame. Greater clarity may be gained by viewing the images separately. Option normally used while processing images for printout. See the section "Viewing Interlaced/Deinterlaced images" in this guide for more information about this option.
9	Graphical record log	Displays a 24 hour time period for the time and date selected. Double click to zoom in on the time line. The time zooms in from 24 hours to single hours. By double clicking the time line, the time line zooms in for searches in smaller time increments. Different colors represent different recording modes: pink=continuous; blue=motion; red=sensor. See the section "Manipulating the Graphical Record Log" in this guide for more information about how to use the timeline features.
10	Cameras selector and scroll bar	Displays camera images in multi-screen divisions of 1, 4, 9, and 16 cameras. Cameras not selected are not visible. For single images, use the camera selection buttons to move the displayed image from one camera to the next. For multi-screen divisions, use the camera selection buttons to select or de-select each camera from the search/display. The scroll bar can be used to access the other cameras not shown.

Item	Name	Description
11	Scan bar (cursor)	Lets you slide a scan bar along the time line and quickly select and view video. A preview pane displays the images as soon as the files are accessed. By double clicking the time line, the time line zooms in for searches in smaller time increments.

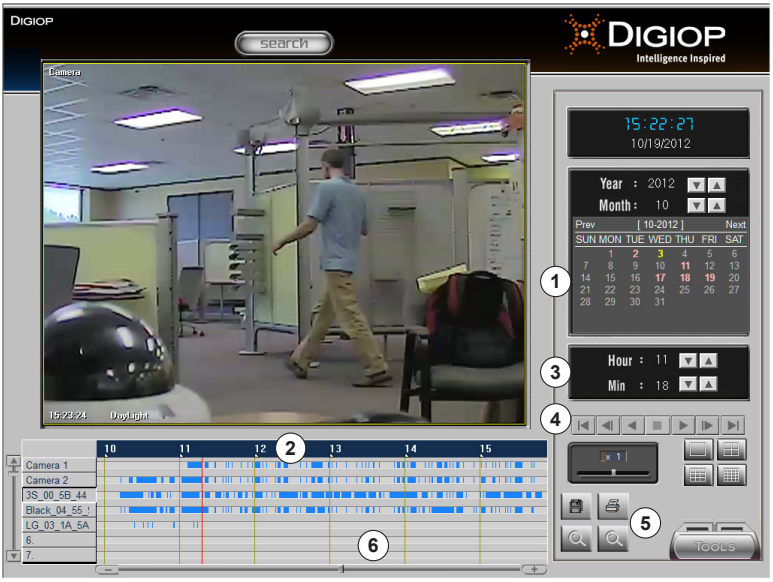
6.1 Searching for recorded video

The Graphical Record Log is used to search for the video record you need. To search for a video record:

1. Open the **Search dialogue**.

2. Select a camera whose video you want to search. The selected camera is outlined in yellow in the viewer.

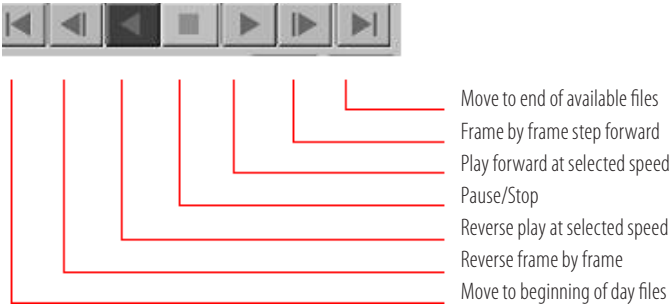
3. Look at the calendar [1] to see when recorded video for the camera is available. Dates in pink indicate video was recorded on that day.



4. Select an approximate date from the calendar of the video event you want to see. The video begins to run in the viewer.

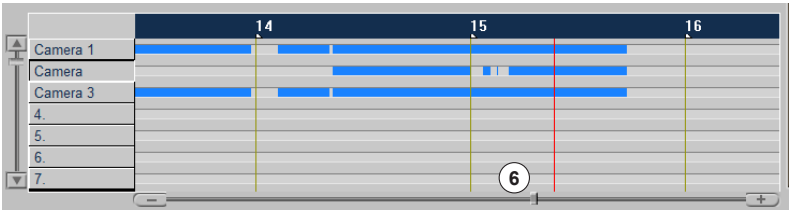
5. The timeline is first displayed in 24 hour intervals. Click anywhere on the timeline to select an hour [2]. You can also select the date from the calendar [1, above] and change the hour or minute with the up and down arrows on the Hour/Min clock [3].

6. Use the video controls [4] to control the video playback. Be prepared to stop and rewind the video, fast forward, etc., to locate the desired segment. Speed up or slow down the playback speed of the video [6] using the slide control. The maximum playback speed is "8X."


Move to end of available files
Frame by frame step forward
Play forward at selected speed
Pause/Stop
Reverse play at selected speed
Reverse frame by frame
Move to beginning of day files

7. Double click once on the dark bar at the top of the time line to zoom in to a shorter time interval. The time zooms in (expands) from 24 hours to approximately six hours, with the selected time roughly in the center of the time line.

8. Slide the vertical scan bar along the time line to another time. You can also move the slide control below the time line [6] to the right or left to change the time.



9. Double click a second time to zoom to a shorter time interval. The time line now shows slightly more than three hours. (The next time you double click, the time line returns to the 24 hour time period.

10. When you locate the desired section of video, you can zoom in to see more details. Here is an example of how the video can look at maximum zoom. Zoom magnifies the image in 48 incremental steps.

11. The buttons [5] at the bottom of the window are used to print a still image, zoom into (or out from) the video image in the frame, and drag a zoomed image in the frame to see a different part.

No Zoom

Maximum Zoom

6.2 Search > Tools Menu

The Search option provides its own individual set of Tools for enhancing images (Image Post Processing), doing Sensor Event searches, and other functions.

1. To access this set of tools, from the Search window, click the **TOOLS** button. This opens the menu shown here.

2. Select a tool.

Search Tools are described in the following sections.

6.2.1 Using the Smart Search tool

Smart Search (also called "Museum Search") lets you analyze video for movement after it has been recorded. Beginning with a video recording, you draw motion-sensitive areas directly onto the image. Any activity occurring within these areas creates an event that the software then logs to the Smart Search list.

For example, you might want to know the specific time(s) that cars entered and exited a parking lot, but you did not set up motion sensitive areas to detect these as they occurred. With Smart Search, you can return to the video and perform a post-video analysis of it. Smart Search logs any motion found in the areas you setup up for motion detection.

Running a Smart Search

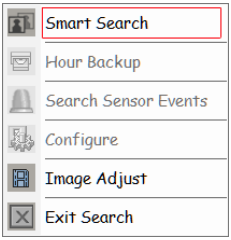
1. From the main DIGIOP® window, select **TOOLS** > **Search**. The main Search window opens.

2. Click on a camera image you want to analyze. The border of the selected camera is highlighted.

3. Select the date/time to start the search of video recorded on this camera.

4. From the Search window, click **TOOLS**. The Search Tools menu opens.

5. Click **Smart Search** from this menu.



6. The Smart Search window appears. This contains the camera video image plus the camera name (Channel Information) and the date and time of the search.

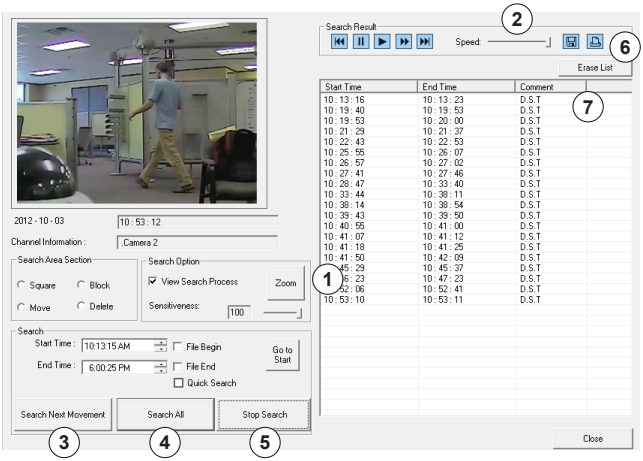


Table 2. Smart Search options

Item	Name	Description
1	Zoom	Only impacts playback. (1) Choose a record. (2) Click **Zoom**. (3) Use the mouse scroll wheel to enlarge an area (e.g., a square or block). (4) Click **Play** and the video plays back at that zoom magnification. At the end of the playback or when a different video record is selected from the Smart Search list, the zoom magnification is retained until the Zoom is clicked again and the mouse wheel is used. To disable Zoom, click the **Go to start** playback control.
2	Speed slide control	Only impacts playback. The playback speed varies depending on the frame rate at which the recording was made. At the lowest setting, the video plays back at about 1 fps.
3	Search Next Movement	Searches the video from the selected camera for motion events.
4	Search All	Erases the current search event list and starts the search from the beginning again. The search can be stopped but not paused. Events are listed by start/end times.
5	Stop Search	Terminates the search completely (no pause option is available).
6	Print	Prints the first image of the search event.
	Save	Launches a folder browser where you can select the destination folder. A folder and file are created as either a .BMP or .JPG. The folder/file format is: Folder and file – 20060118-071746.079-01. The name format is: YYYYMMDD – HHMMSS.RRR – Cam# (where RRR is a 1/1000 second reference number).
7	Erase List	The Erase List button erases the current search event list.

NOTE *Initially, the data area on the right is empty until you run a search. In this example, the Smart Search was already run so some information is already shown.*

7. In the Search field, enter one of these options:

   — Enter the **Start Time** and **End Time** or use the up and down arrows to select the time you want to run the Smart Search.

   OR

   — Check the File Begin and **File End** check boxes to match the start and end times to the available file content.

NOTE *By default, the system opens with the Start Time set to the beginning of the first recording for that camera on the day selected (initially, this is the same as the "File Begin" time). The End Time is the time the file ends (initially, this is the same as "File End" time).*

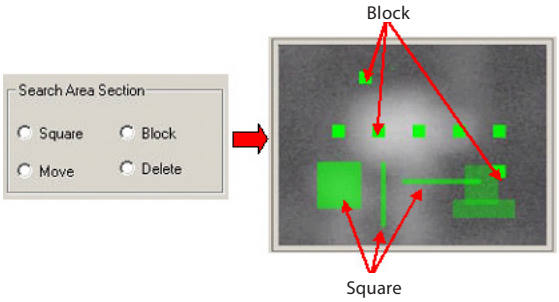
8. Click **Go to Start** to see where the video begins.

9. Adjust the Start Time and End Time as necessary to locate the desired video.

10. Place a check mark in the **Search Area Section** to place a Block or a Square to define the search regions:

    — **Block** – Click on the desired location on the image to add a fixed-size square. You can add up to 20 horizontal and 15 vertical blocks to the image.

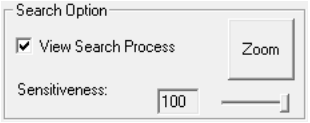
    — **Square** –Click on the desired location on the image and then drag the mouse to define a "square" region.



NOTE *Multiple blocks and squares can be added to a single image to create the motion sensitive regions you want. Blocks and squares may overlap.*

11. Check **Move** to move blocks and squares to new locations. You can also Delete them.

12. Place a check mark in **View Search Process** to view all video, not just the images where movement is detected.



NOTE *When this option is unchecked, the only images that are previewed are those where movement is detected. In this case, if no event is found, the image does not change.*

13. In the Search Option frame, adjust the Sensitiveness slide control for the percent of movement required to trigger an event. The number of events appearing on the event log reflects the sensitivity of the regions, i.e., 100% sensitivity generates more events.

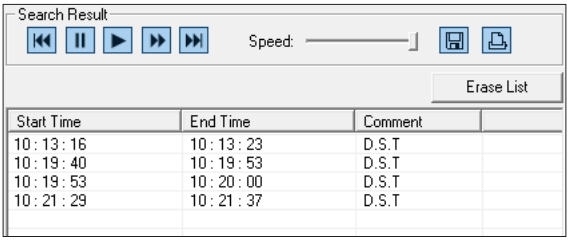
    0% – Not sensitive to movement

    100% – Very sensitive to any changes in the defined regions.

14. If you would like to speed up the search process, check the Quick Search option. Searches can be completed up to 20% faster using this option.

NOTE *During testing, a 10 minute recording was completed approximately 20% faster with Quick Search. Search times typically take 60 seconds for 10 minutes of video. The Quick Search only reviews the "index" images and ignores the other images. In a relatively motionless scene, this option could save considerable search time. If the Quick Search option is not selected, the search feature reviews every image recorded.*

15. Begin the search by clicking **Search Next Movement**. The search pauses at the first event (i.e., movement is detected inside a defined sensitive region). Each event detected in this way appears in the list with a start and stop time.



16. Click **Search Next Movement** again to move to the next search.

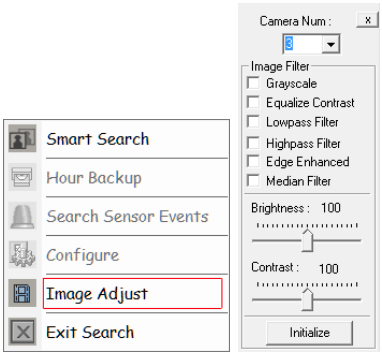
17. Continue to click **Search Next Movement** until the search is complete. You can also select **Search All**, which erases the current search event list and re-starts the search. A search can be stopped, but not paused.

18. Play the events in the list by highlighting an event and clicking the **Playback** control. Other Search Controls are described in Table 15.

6.2.2 Using the Image Adjust Tool during live playback

This Search Tools option adjusts the live playback of a video record. When you are done, the image reverts back to the default settings. This option does not let you save settings.

1. Click **Image Adjust**.



2. Select the camera to adjust from the Camera Num drop-down list.

NOTE *This option lets you adjust settings for one camera at a time.*

3. Select any one or more Image Filter options. The image will be adjusted according to the filters chosen.
4. Adjust the Brightness as required (real time preview update).
5. Adjust the Contrast as required (real time preview update).
6. Click **Play** to view the video record.
7. To restore (normalize) the image again, click Initialize to revert all settings back to their default values.

APPENDIX A
Hard Drive Configuration

DIGIOP® systems perform specific hard drive partitioning.

- DIGIOP® systems are configured using multiple partitions.
- Partitions may contain the operating system, drivers, and setup or data files.
- Most files and software are in folders named DIGIOP or DissTech.

Table 3. Drive Partitions

Drive	Size	Description
CAUTION	Do not access or modify any drives unless specifically directed to by DIGIOP® Technical Support. Most files are encrypted and affect system operation.	
System C:\	Approx. 33.5 GB	Windows OS and the system software; Windows folder structure
DATA D:\	Dependent on HDD size	DissTech (video files), Database, and Index files
DVD R/W E:\ Drive		**Note**: Drive letter may change

OTHER DRIVES

Depending on the configuration of the system and the amount of storage space available, other drives may be used for data storage. Once the system has consumed all DATA storage drives, it searches for the next drive in alphabetical order and starts recording data on that drive.

NOTE *Any drive 4GB or greater in size is considered by the system to be a storage device. The system will attempt to write data to it after the DATA drives are full.*

APPENDIX B
Software Upgrade to DIGIOP ELEMENTS™

DIGIOP® systems with previous software versions can be upgraded only if the software is installed on one of the following computers:

- DELL™ Optiplex™ XE
- DELL OptiPlex 760
- DELL Optiplex 790
- DELL OptiPlex 960
- DELL Optiplex 7010
- DELL Optiplex 9010
- DELL Precision™ T3400
- DELL PowerEdge™ R310 or newer computer a Intel® Pentium® D processor (or better) running Microsoft Windows XP Professional

XP Embedded Systems (DIGIOP® Server software V7.0-7.4)

To upgrade a DIGIOP® systems installed on a Microsoft XP Embedded operating system, contact your sales representative.

XP Professional Systems (DIGIOP® Server software V7.5-7.6.1)

To upgrade a DIGIOP® systems installed on a Microsoft XP Professional operating system, contact your sales representative.

DIGIOP® systems with a Microsoft XP Professional operating system can be upgraded to DIGIOP ELEMENTS™ (V8.8) software and may use either the Installer Method (see below) or the Image Method with the purchase of an upgrade SKU, which includes a license for Windows 7 operating system.

APPENDIX C
Adding DIGIOP® Licenses

Licenses are added to the system after system installation to expand the capabilities of the system. Your system is initially provided with two licences that are pre-loaded: a base licence, and a channel license. Additional licenses are available to enable data features, monitor point of sale (POS) devices, integrate DIGIOP® with other systems such as infinias™ Intelli-M® Access, etc.

During system recovery, the base license, channel license, and all additional licences acquired for your system must be re-installed. Licenses purchased with your system are usually provided on stickers on the case of your server hardware.

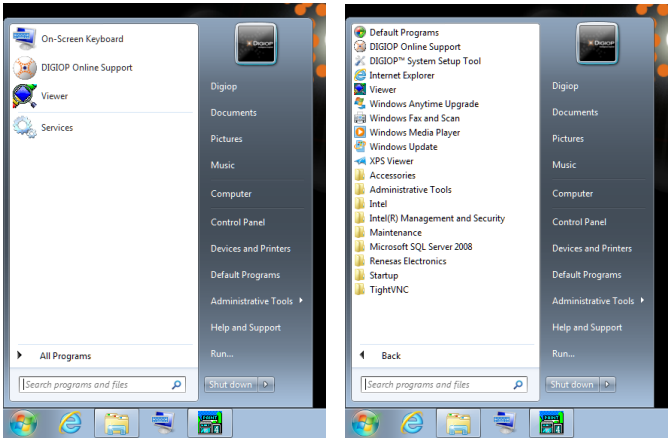
NOTE *The license examples shown in this Appendix may be different from the ones required for your system. Consult your DIGIOP® sales representative for more information.*

Installing additional licenses

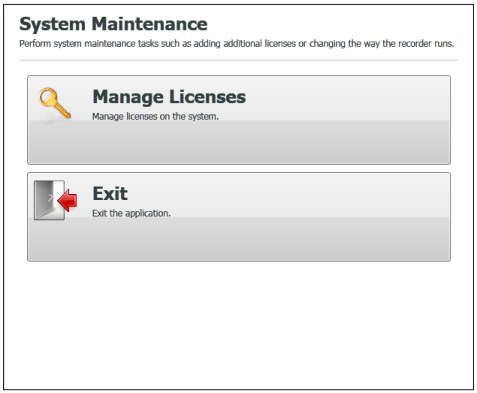
To install additional licenses, do the following:

1. Acquire your new License ID and Password from your DIGIOP® dealer, or from DIGIOP, Inc.

2. Click the Windows **Start** button, then select **All Programs** to open the program list. Depending on your system configuration, the Start menu and programs list may appear different from the screen captures shown below.

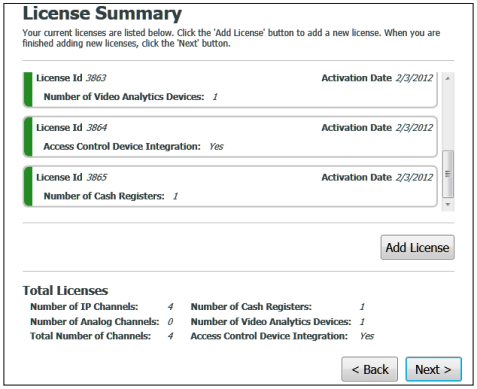


3. In the All Programs list, open the **DIGIOP™ System Setup Tool**.
4. In the System Maintenance window, click **Manage Licenses**.

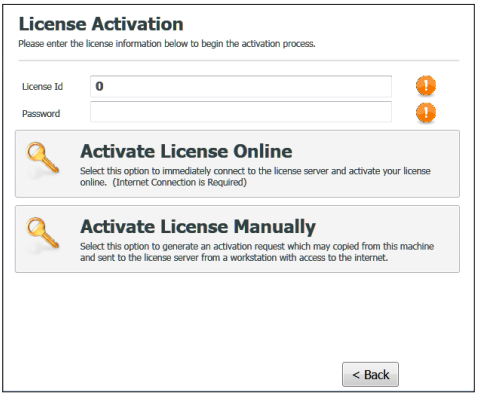

System Maintenance
Perform system maintenance tasks such as adding additional licenses or changing the way the recorder runs.
Manage Licenses
Manage licenses on the system.
Exit
Exit the application.

Selecting Manage Licenses opens the License Summary window.

5. On the License Summary display, click **Add License.**


License Summary
Your current licenses are listed below. Click the 'Add License' button to add a new license. When you are finished adding new licenses, click the 'Next' button.
License Id 3863
Activation Date 2/3/2012
Number of Video Analytics Devices: 1
License Id 3864
Activation Date 2/3/2012
Access Control Device Integration: Yes
License Id 3865
Activation Date 2/3/2012
Number of Cash Registers: 1
Add License
Total Licenses
Number of IP Channels: 4
Number of Analog Channels: 0
Total Number of Channels: 4
Number of Cash Registers: 1
Number of Video Analytics Devices: 1
Access Control Device Integration: Yes
< Back
Next >

6. On the License Activation display, enter your new License ID and Password.


License Activation
Please enter the license information below to begin the activation process.
License Id
0
Password
Activate License Online
Select this option to immediately connect to the license server and activate your license online. (Internet Connection is Required)
Activate License Manually
Select this option to generate an activation request which may copied from this machine and sent to the license server from a workstation with access to the internet.
< Back

7. Follow the on-screen instructions to complete the activation process. This process may require a system restart.

8. Select **Activate License Online** if you have an Internet connection. Otherwise, select **Activate License Manually** and follow the on-screen instructions t to complete the activation.

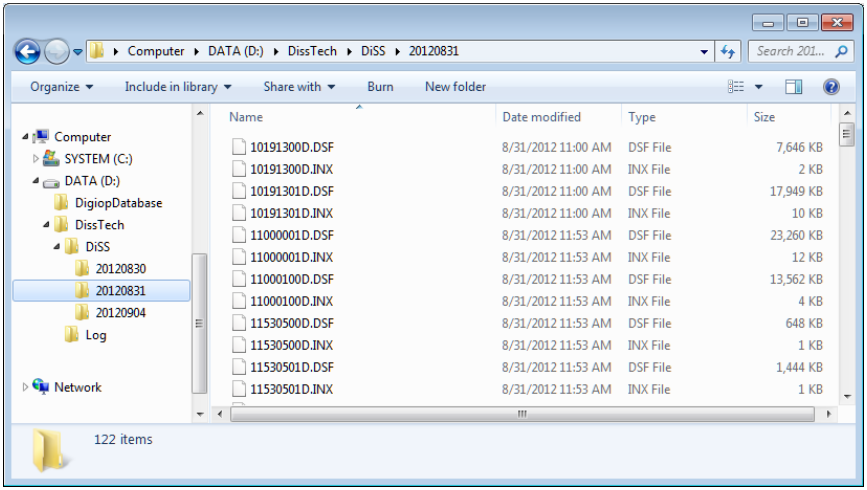
APPENDIX D
File Naming Conventions

NOTE *Any drive 4GB or greater in size is considered a storage device by the system.*

DAILY DIRECTORIES

Each day the system runs, the Server application creates a new directory under DiSSTech\DiSS. These daily directories are formatted as YEAR-MONTH-DAY (yyyymmdd).

Example: The highlighted directory named 20120831 is for 31 August, 2012.

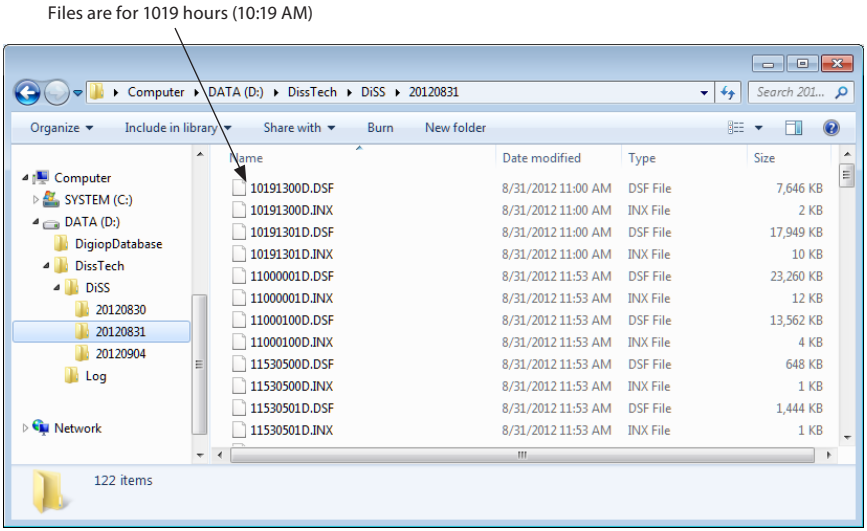


File Naming Convention

In each daily directory, files are saved in encrypted .DSF and index (.INX) format. The .DSF file can be viewed using a utility, such as the DIGIOP® Connect remote access viewer or the DIGIOP® Enterprise viewer.

These hour files are in the format HOUR (24 hours)–MINUTE–SECOND–CAMERA CODE–Event Type, using two digits each (hhmmsscc).

Example: The file called 10191300D.DSF is the hourly video file for the .INX and .DSF files in directory 20120831.


Files are for 1019 hours (10:19 AM)
Computer ▸ DATA (D:) ▸ DissTech ▸ DiSS ▸ 20120831
Search 201...
Organize
Include in library
Share with
Burn
New folder
Computer
SYSTEM (C:)
DATA (D:)
DigiopDatabase
DissTech
DiSS
20120830
20120831
20120904
Log
Network
Name
Date modified
Type
Size
10191300D.DSF 8/31/2012 11:00 AM DSF File 7,646 KB
10191300D.INX 8/31/2012 11:00 AM INX File 2 KB
10191301D.DSF 8/31/2012 11:00 AM DSF File 17,949 KB
10191301D.INX 8/31/2012 11:00 AM INX File 10 KB
11000001D.DSF 8/31/2012 11:53 AM DSF File 23,260 KB
11000001D.INX 8/31/2012 11:53 AM INX File 12 KB
11000100D.DSF 8/31/2012 11:53 AM DSF File 13,562 KB
11000100D.INX 8/31/2012 11:53 AM INX File 4 KB
11530500D.DSF 8/31/2012 11:53 AM DSF File 648 KB
11530500D.INX 8/31/2012 11:53 AM INX File 1 KB
11530501D.DSF 8/31/2012 11:53 AM DSF File 1,444 KB
11530501D.INX 8/31/2012 11:53 AM INX File 1 KB
122 items

For the example above:

- HOUR = 10 (10 AM))
- MINUTE = 19 minutes
- SECOND = 13 seconds
- CAMERA CODE = Camera 00 (Camera 1 is 00, Camera 2 is 01, Camera 3 is 02, etc.)
- Event Type = D

The video file size depends largely on the duration of the recording, the recording modes (e.g., motion versus continuous), and compression type.

APPENDIX E
TCP/IP Port Settings Using the Firewall

If there is a firewall between the DVR and the PCs on remote sites running the DIGIOP® Connect software, you must open ports to allow communications. The tables below contain TCP/IP port settings and router port forwarding settings:

Table 4. TCP/IP settings

TCP/IP	Port (TCP)*
Log-in connection	7000
Transmission for live viewing	8000, 8001
Transmission for remote playback (VOD)	9000, 9001
Connection for server diagnosis	8002
Transmission for alarmed video notification	8003
Time synchronization	3000
SMTP for email event notification	25
Two-Way Audio	7021
Event notification	8875 (UDP) *Each port number is fixed Multicast protocol port, IP = 230.255.255.255
DIGIOP® Data	24752

Table 5. Router Ports Forwarded

Function	Ports	Function	Forward	Required / Optional
Logon	7000	TCP	Yes	Required
Live transmission	8000, 8001	TCP	Yes	Required
Checking Server	8002	TCP	Yes	Required
Alarm input	8003	TCP	Yes	Optional
VOD transmission	9000, 9001	TCP	Yes	Required
Time Sync	3000	TCP	Yes	Optional
Two-Way Audio	7021	TCP	Yes	Optional
Event Notification	8875	UDP	Yes	Optional
DIGIOP® Data	24752	TCP	Yes	Required

APPENDIX F
Warranty Information

Warranty information about your system may be found at: *www.infinias.com*.

Click the **SUPPORT** button, then select **Warranty Information**.